



HAZARDOUS WASTE TANK SYSTEM ASSESSMENT

ARIA Acid Waste Neutralization (AWN) System Santa Clara, CA

Prepared for:
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1 Infinite Loop
Cupertino, California 95014

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TRC
10680 White Rock Road, Suite 100
Rancho Cordova, CA 95670

October 2022

HAZARDOUS WASTE TANK SYSTEM ASSESSMENT

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I. INTRODUCTION

This assessment is specifically for the Acid Waste Neutralization (AWN) System at the Apple, Inc. (Apple) ARIA facility (Facility), located at 3250 Scott Boulevard in Santa Clara, California.

This assessment was performed in accordance with the requirements of Section 66265.192 of Title 22 of the California Code of Regulations (22 CCR 66265.192), and included a physical inspection of the tank system and an evaluation of secondary containment.

The system was previously assessed when new in September 2015, and again in November 2020. This is a 5-year re-assessment per 22 CCR 66265.192(h)(1) to bring all systems at the facility onto the same assessment schedule.

II. PURPOSE

22 CCR 66265.192 requires that owners of a new hazardous waste tank system (subject to 22 CCR 67450.2 "Permit by Rule") ensure that the tank system is adequately designed and constructed, and obtain and keep on file at the Facility a written assessment reviewed and certified by an independent, qualified, professional engineer, registered in California that attests to the tank system's integrity.

The written assessment shall determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be transferred, stored or treated to ensure that it will not collapse, rupture, or fail.

At a minimum, the assessment for an above-ground system shall include the following information: 1) design standard(s) according to which the tank and ancillary equipment have been constructed; 2) hazardous characteristics of the waste(s) to be handled; 3) foundation and seismic anchorage design.

All new tank systems shall be tested for tightness, and determined to be free of leaks before being placed in use.

In accordance with 22 CCR 66265.192(h)(1), this assessment is valid for a maximum period of five (5) years, and shall include all of the information described in 22 CCR 66265.192(k). The required assessment information is presented in the following Section III.

III. ASSESSMENT AND FINDINGS

22 CCR 66265.192(k)(1)

The tank system consists of the acid waste pump lift station (AW-LS), equalization tank (AWN-TNK-010), three (3) reaction tanks (AWN-TNK-100/200/300), diversion tank (AWN-TNK-400), and ancillary piping. The lift station is a vertical rectangular tank constructed of white polypropylene and has a primary tank capacity of 203 gallons. The equalization, reaction and diversion tanks are identical, with the exception of nozzle locations, vertical cylindrical tanks constructed of fiberglass and vinyl ester resin (Hetron 922); each with a capacity of approximately 3,000 gallons.

22 CCR 66265.192(k)(2)

AW-LS

The acid waste pump lift station tank is constructed of ¾"-thick white polypropylene per DVS 2205 design standards. Tank system structural design is in accordance CBC 2013 and ASCE 7-10. Ancillary piping is Schedule 80 (SCH-80) PVC with clear PVC containment pipe, where applicable. See Figure 1 for pipe sizes. The lift station utilizes two (2) internal 5-hp stainless steel submersible pumps. A drawing of the tank, with dimensions, is included in Attachment 1.

AWN-TNK-010/100/200/300/400

The equalization, reaction and diversion tanks are constructed of variable thickness fiberglass and vinyl ester resin (Hetron 922) per ASTM D3299 and D4097 design standards. Tank system structural design is in accordance CBC 2013 and ASCE 7-10. Ancillary piping is Schedule 80 (SCH-80) PVC with clear PVC containment pipe, where applicable. See Figure 1 for pipe sizes. The acid waste neutralization system utilizes four (4) 2-hp horizontal centrifugal pumps. The tanks are 8 feet in diameter and 8 feet in height. A drawing of the tanks, with dimensions, is included in Attachment 2.

22 CCR 66265.192(k)(3)

The tank system was constructed in September 2015 (7 years old).

22 CCR 66265.192(k)(4)

The lift station tank (AW-LS) is double-walled and the space between the primary and secondary tank is equipped with a liquid sensor that would detect a leak from the primary tank.

The equalization tank (AWN-TNK-010) is located on the mezzanine level within an epoxy-coated concrete berm area. The bermed area is sloped toward a collection drain that flows to the lift station pit. The lift station pit is equipped with a liquid sensor that would detect a leak from the tank or related ancillary piping.

The reaction and diversion tanks (AWN-TNK-100/200/300/400) are located on the ground level within an epoxy-coated concrete berm area. The bermed area is sloped to drain to collection sumps that are equipped with liquid sensors that would detect a leak from a tank or related ancillary piping.

Ancillary pipe that is not within a tank containment berm is double-walled and sloped to drain to liquid sensors that would detect a leak in the primary pipe. All automated systems, including liquid sensors for leak detection, have been tested and confirmed to operate as designed.

22 CCR 66265.192(k)(5)

The tank system is entirely above-ground and materials are not subject to corrosion.

22 CCR 66265.192(k)(6)

The tanks are equipped with ultrasonic level sensors to prevent overflow. All automated systems, including liquid level sensors and pump controls, have been tested and confirmed to operate as designed.

22 CCR 66265.192(k)(7)

The lift station tank (AW-LS) is set within a secondary containment tank, also constructed of ¾'-thick white polypropylene, with an approximate capacity of 255 gallons.

The equalization tank (AWN-TNK-010) is located on the mezzanine level within an epoxy-coated concrete berm area. The bermed area is sloped toward a collection drain that leads directly to the lift station pit (also epoxy-coated concrete) with adequate capacity to contain the full volume of the tank.

The reaction and diversion tanks (AWN-TNK-100/200/300/400) are located on the ground level within an epoxy-coated concrete berm area. The bermed area is sloped to drain to collection sumps and is also connected by a weir to the lift station pit (also epoxy-coated concrete) with adequate capacity to contain the full volume of the tanks.

Ancillary pipe that is not within a tank containment berm is double-walled and sloped to drain to liquid sensors that would detect a leak in the primary pipe. The sensor locations area also fitted with ports that would allow for collection of the leaked liquid.

Along with the leak detection systems described above, the secondary containment for the tank system meets the standards of 22 CCR 66265.192(j) and 22 CCR 66265.193.

22 CCR 66265.192(k)(8)

The system generally handles low-pH (potentially corrosive) waste liquids generated from laboratory activities.

22 CCR 66265.192(k)(9)

No structural damage or inadequate construction/installation items (cracks, punctures, or damaged fittings) were observed.

22 CCR 66265.192(k)(10)

All ancillary pipe was leak tested using air-pressure at the time of installation, test results are included as Attachment 3.

The lift station tank, equalization tank, reaction tanks and diversion tanks were tested by the manufacturer prior to transport to the Facility for installation.

22 CCR 66265.192(k)(11)

Based on the findings of this assessment, the tank system has an estimated remaining service life of approximately 20 years under existing conditions. The estimated remaining service life should be re-evaluated every five (5) years, in conjunction with the re-assessment in accordance with the requirements of 22 CCR 66265.192(h)(1).

IV. CERTIFICATION

ARIA Acid Waste Neutralization System October 2022

22 CCR 66265.192 requires that owners of a new hazardous waste tank system (subject to 22 CCR 67450.2 "Permit by Rule") ensure that the tank system is adequately designed and constructed, and obtain and keep on file at the Facility a written assessment reviewed and certified by an independent, qualified, professional engineer, registered in California that attests to the tank system's integrity.

The preceding written assessment has determined that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be transferred, stored or treated to ensure that it will not collapse, rupture, or fail. This assessment for an above-ground system considered the following: 1) design standard(s) according to which the tank and ancillary equipment have been constructed; 2) hazardous characteristics of the waste(s) to be handled; 3) foundation and seismic anchorage design.

The tank system was inspected on October 19, 2022. The visual inspection found none of the following to be in evidence: leaks, weld breaks, punctures, scrape of protective coatings, cracks, corrosion, structural damage or installation defects.

As required by 22 CCR 66265.192(k)(11), based on the findings of this assessment, I estimate that the new tank system has at least twenty (20) years of service life under current conditions. In accordance with 22 CCR 66265.192(h)(1), this assessment is valid for a maximum period of five (5) years and the tank system should be re-assessed at that time to obtain a new estimate of remaining service life.

Based on my assessment of the tank system, I can attest that the tank system has sufficient structural integrity, is acceptable for transferring, storing and treating the intended hazardous waste, and is suitably designed to achieve the requirements under 22 CCR 66265.192.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



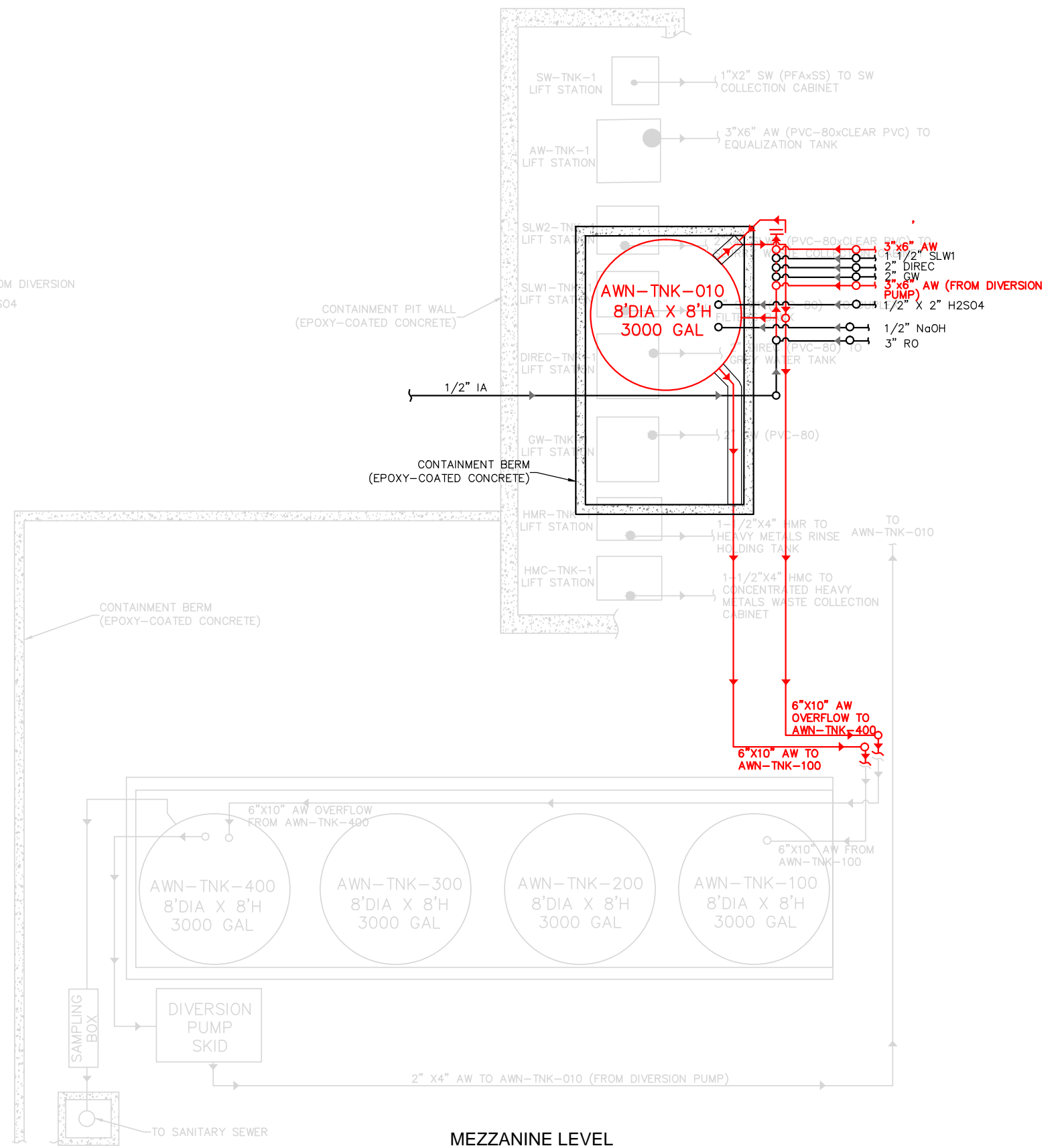
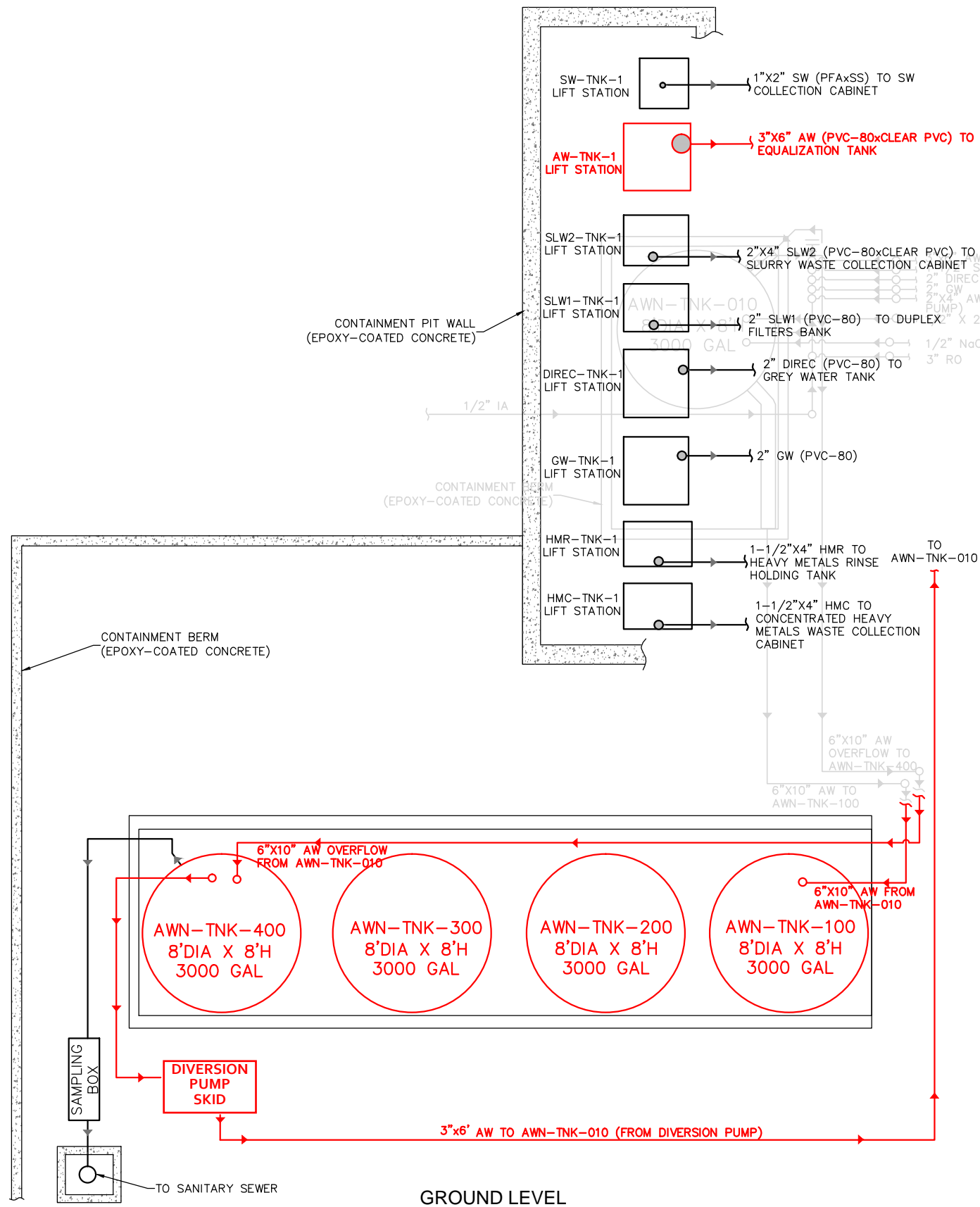
Stephen V. Huvane, P.E.
Civil (CA) No. 52385



12-9-2022

Date

FIGURE



LEGEND
 — SYSTEM COMPONENTS ASSESSED

TANK SYSTEM LAYOUT ARIA ACID WASTE NEUTRALIZATION SYSTEM

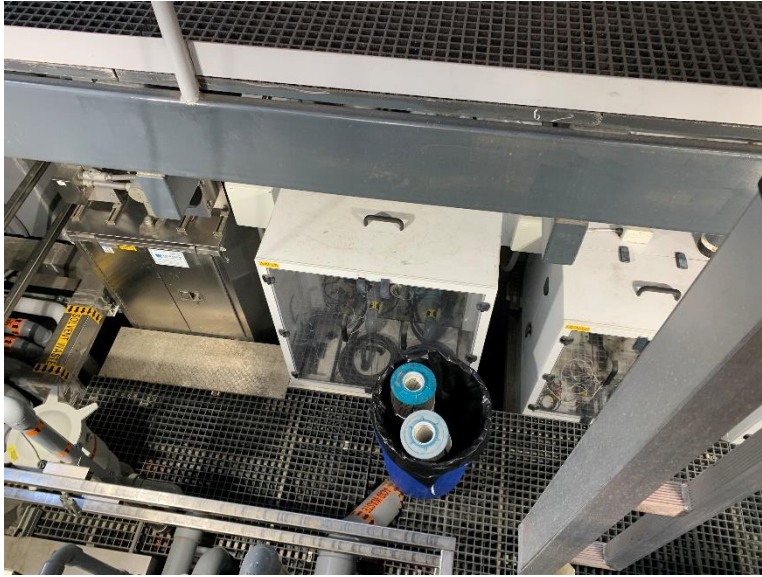


FIGURE 1

APPENDIX A

PHOTOGRAPHS

October 19, 2022



Lift Station (AW-LS) and Lift Station Pit



Ancillary Piping to Equalization Tank



Equalization Tank (AWN-TNK-010)



Reaction Tank (AWN-TNK-100) and Ancillary Piping



Reaction Tank (AWN-TNK-200) and Ancillary Piping



Reaction Tank (AWN-TNK-300) and Ancillary Piping

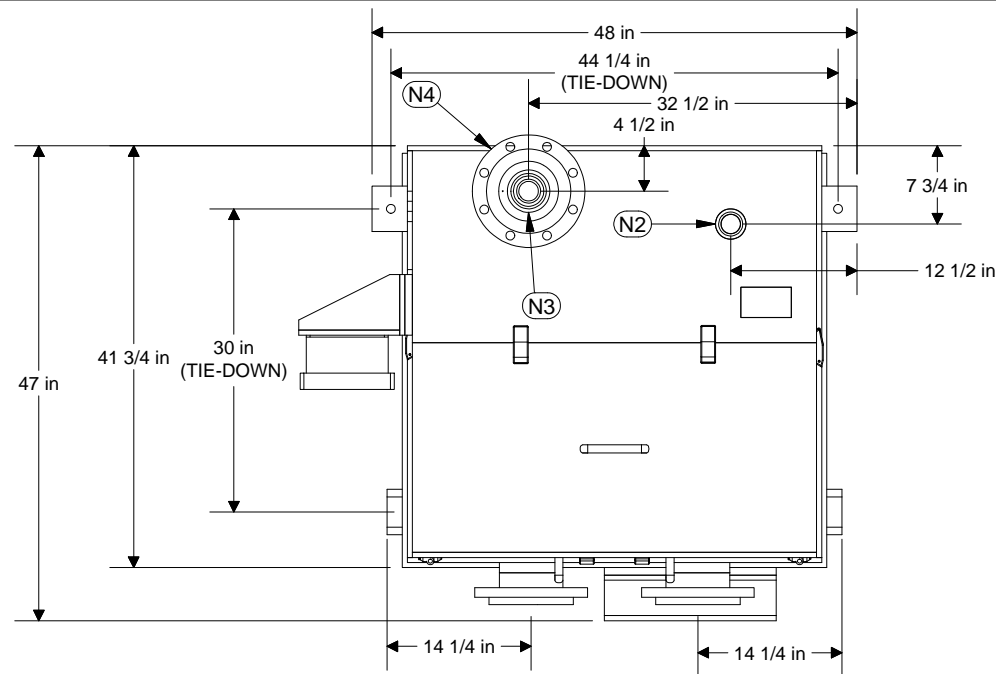


Diversion Tank (AWN-TNK-400) and Ancillary Piping

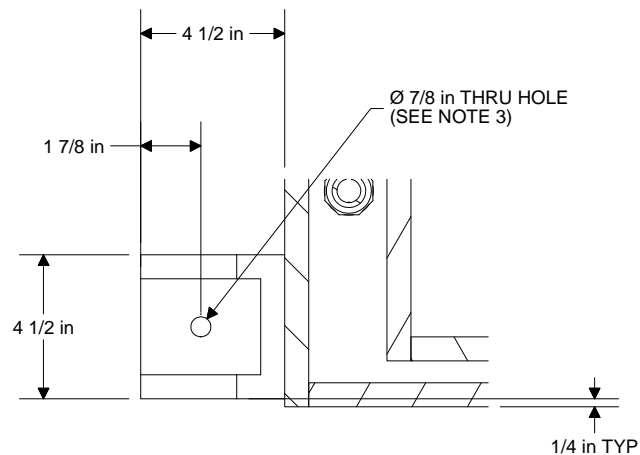


Diversion Pump Skid and Ancillary Piping

ATTACHMENT 1
AW-LS INFORMATION

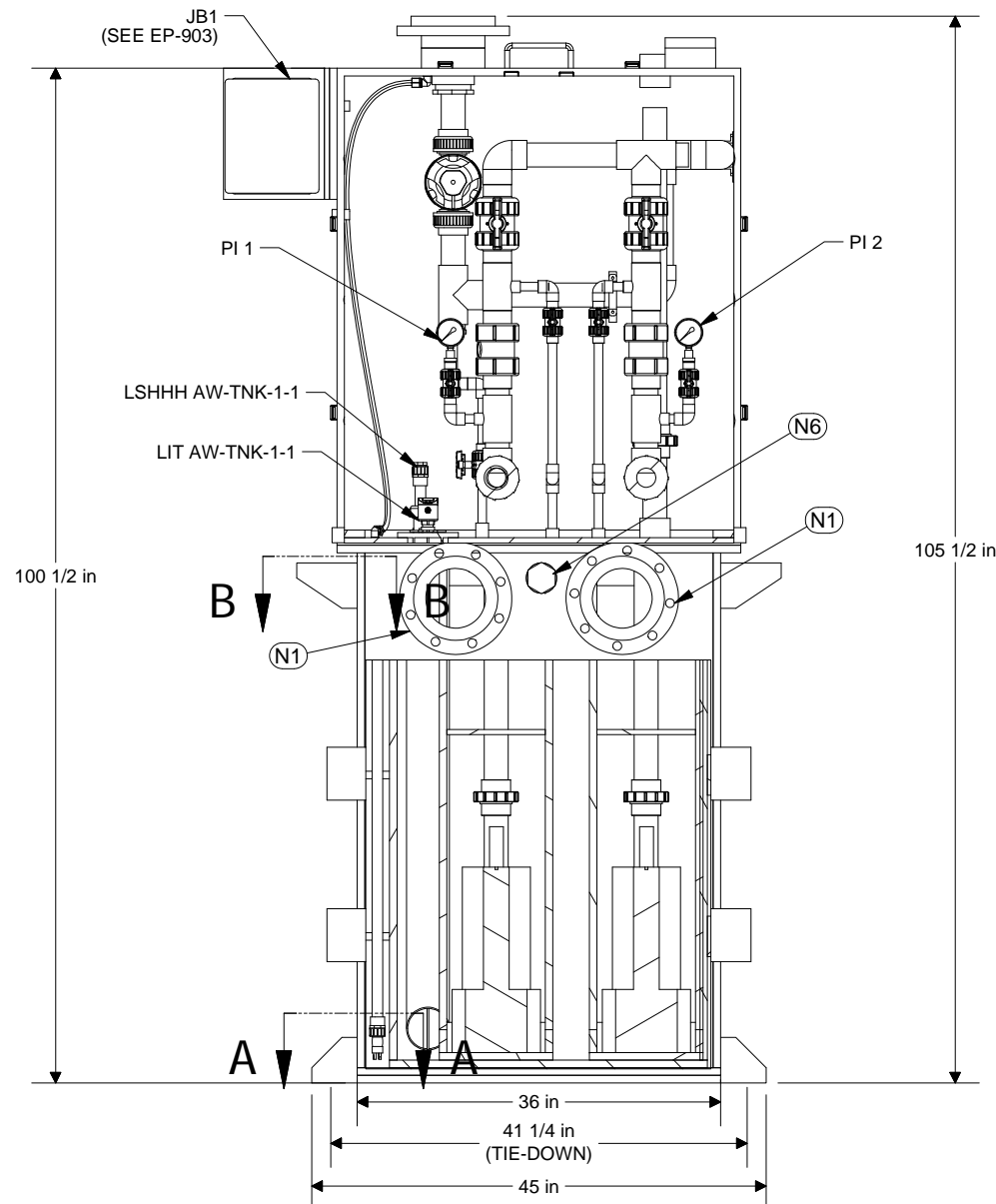
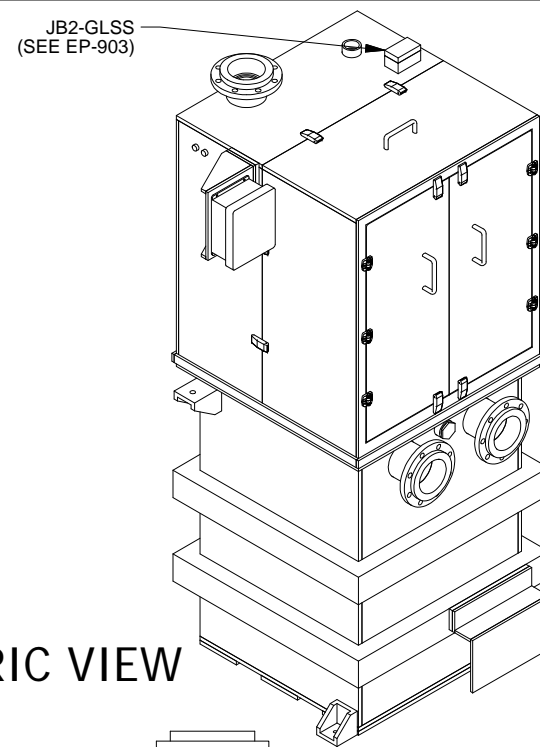


PLAN VIEW

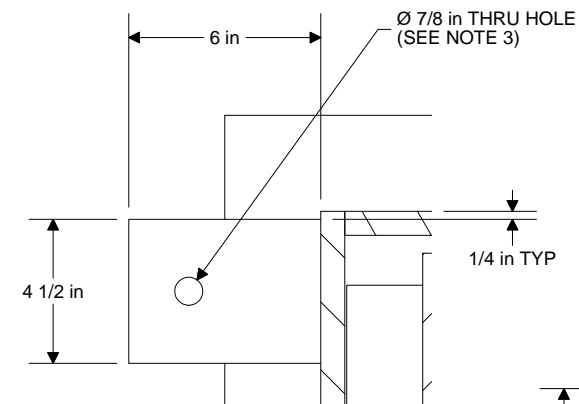


SECTION A-A
(TIE-DOWN)

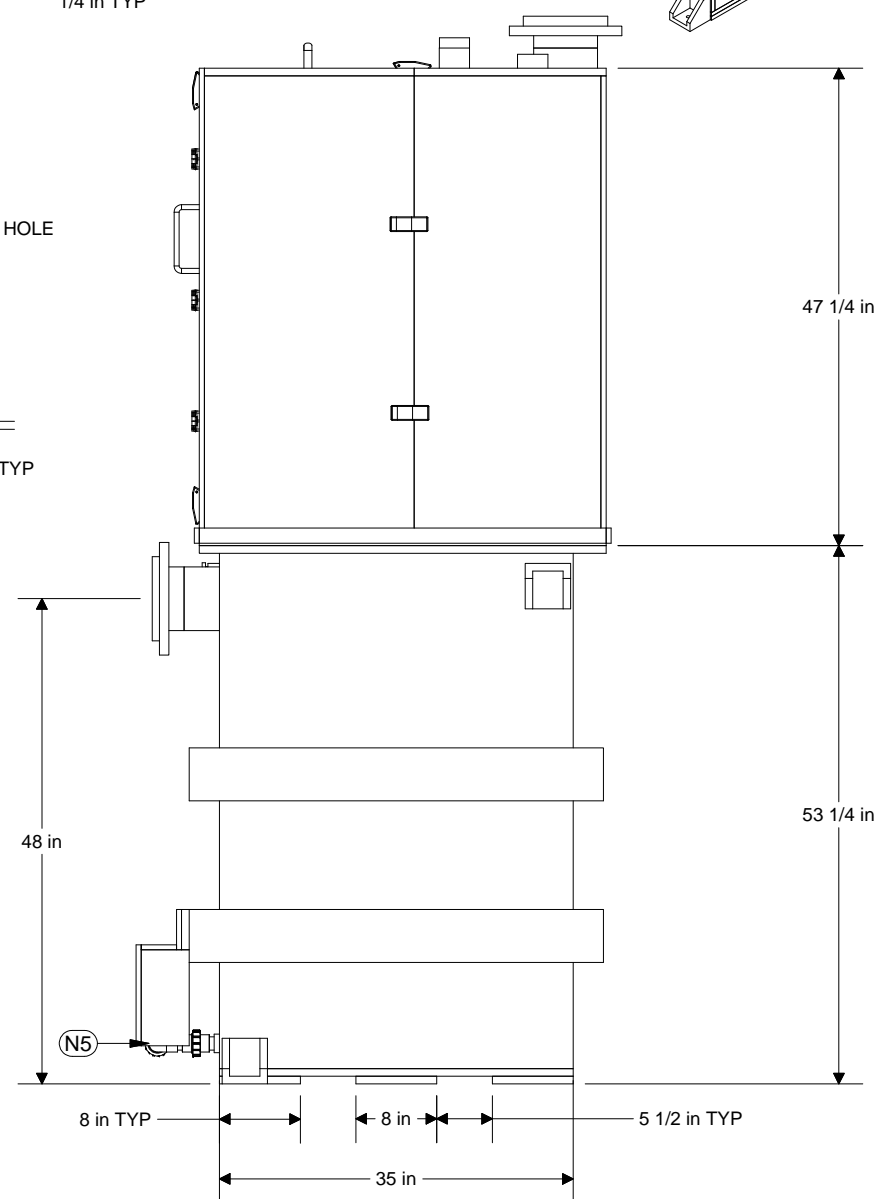
ISOMETRIC VIEW



ELEVATION VIEW



SECTION B-B
(INVERTED TIE-DOWN)



SIDE ELEVATION VIEW

NOZZLE SCHEDULE			
NOZZLE	DESCRIPTION	QTY	SERVICE
N1	6" FLANGE	2	INLET
N2	2" FNPT	1	VENT
N3	3" FNPT	1	PUMPED DISCHARGE
N4	6" FLANGE	1	DOUBLE CONTAINMENT
N5	1" FNPT	1	CONTAINMENT DRAIN
N6	2" FNPT	2	PLUGGED OVERFLOW

- NOTES:
- MATERIALS OF CONSTRUCTION:
A) TANKS TO BE FABRICATED FROM 3/4" THICK WHITE POLYPROPYLENE.
B) ACCESS DOORS AND HATCHES TO BE 1/4" THICK CLEAR PVC.
C) ALL PIPING AND FITTINGS TO BE SCH 80 CPVC.
D) HARDWARE TO BE 18-8 SS.
 - ALL SURFACES TO BE SEALED WITH PTFE GASKET TAPE.
 - SOME SUPPORTS NOT SHOWN FOR CLARITY. ANCHOR BOLTS TO BE SIZED BY WASTECH, PROVIDED AND INSTALLED BY OTHERS.
 - INSTALLATION, INTERCONNECTING PIPING AND WIRING SUPPLIED AND INSTALLED BY OTHERS. INSTALLER TO PROVIDE ADEQUATE VENTILATION TO THE TANK.
 - FIELD WIRING FROM JUNCTION BOX TO CONTROL PANEL ON GRADE BY OTHERS.
 - APPROXIMATE EQUIPMENT WEIGHTS:**
A) DRY WEIGHT: 1520 LBS
B) OPERATING WEIGHT: 3450 LBS
C) MAXIMUM WEIGHT: 3730 LBS
 - PRIMARY TANK VOLUME: 203 GAL
CONTAINMENT TANK VOLUME: 255 GAL

REV.	DATE:	BY:	DESCRIPTION
3	4/15/2015	MM	AS BUILT
2	3/31/2015	MM	ISSUED FOR FABRICATION
1	1/22/2015	MM	RESUBMITTED FOR APPROVAL
0	12/12/2014	MM	SUBMITTED FOR APPROVAL

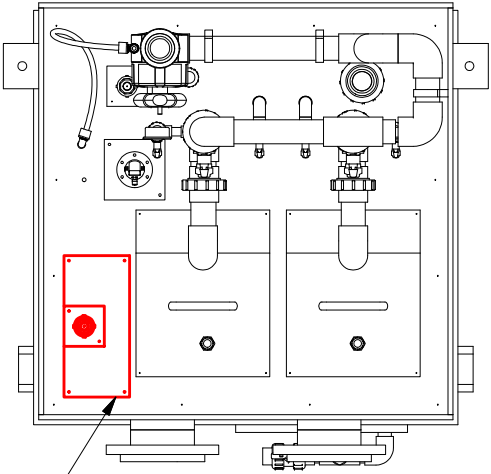
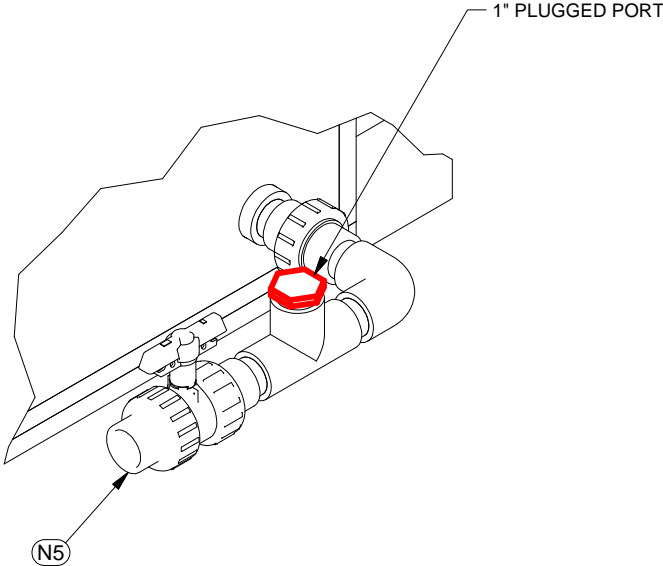
APPROVALS		DATE
DRAWN BY:	MM	12/12/2014
PROJECT ENG.:	SS	
ENGINEERING MANAGER:	SS	

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SIZE B	DWG. NO. 141190-MG-901	
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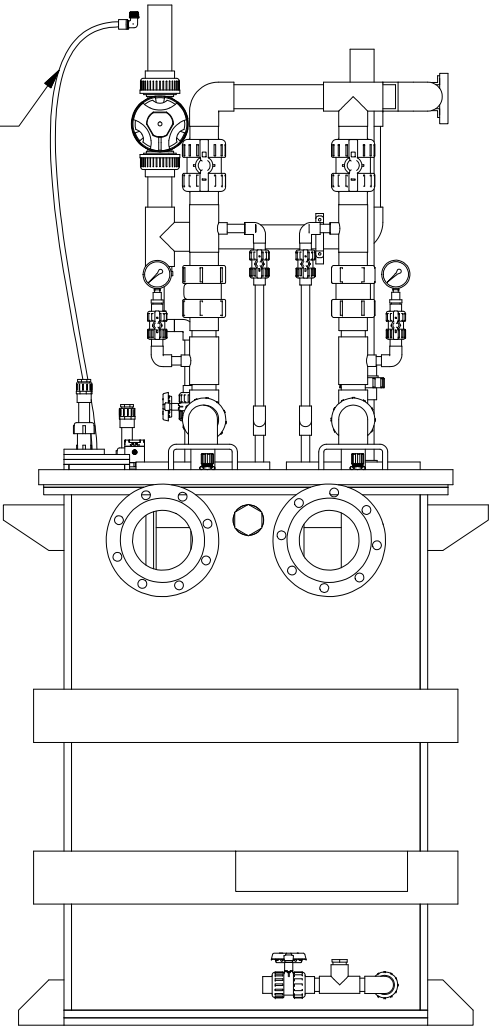
DETAIL A



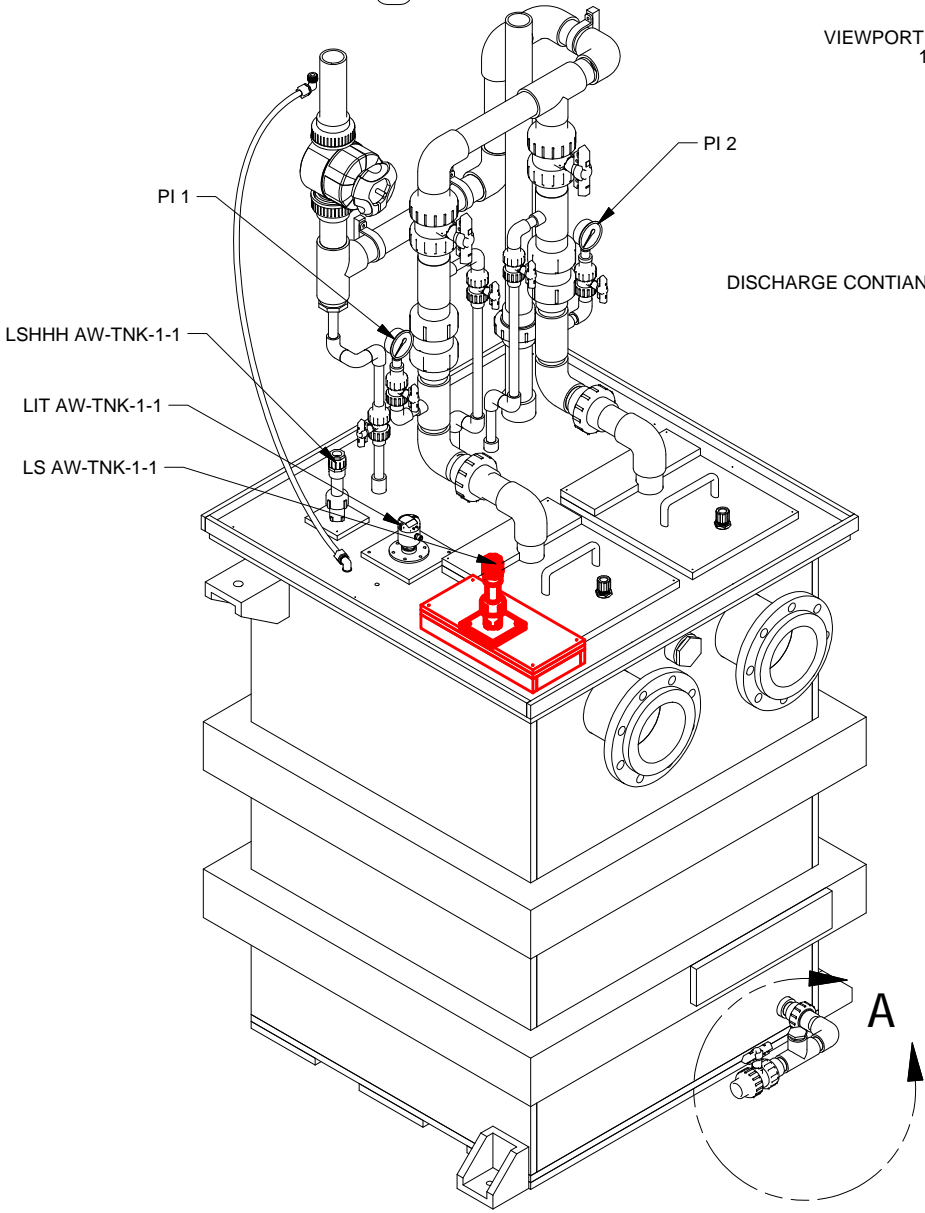
PLAN VIEW

VIEWPORT WITH 2" RISERS
12" x 7" OPENING

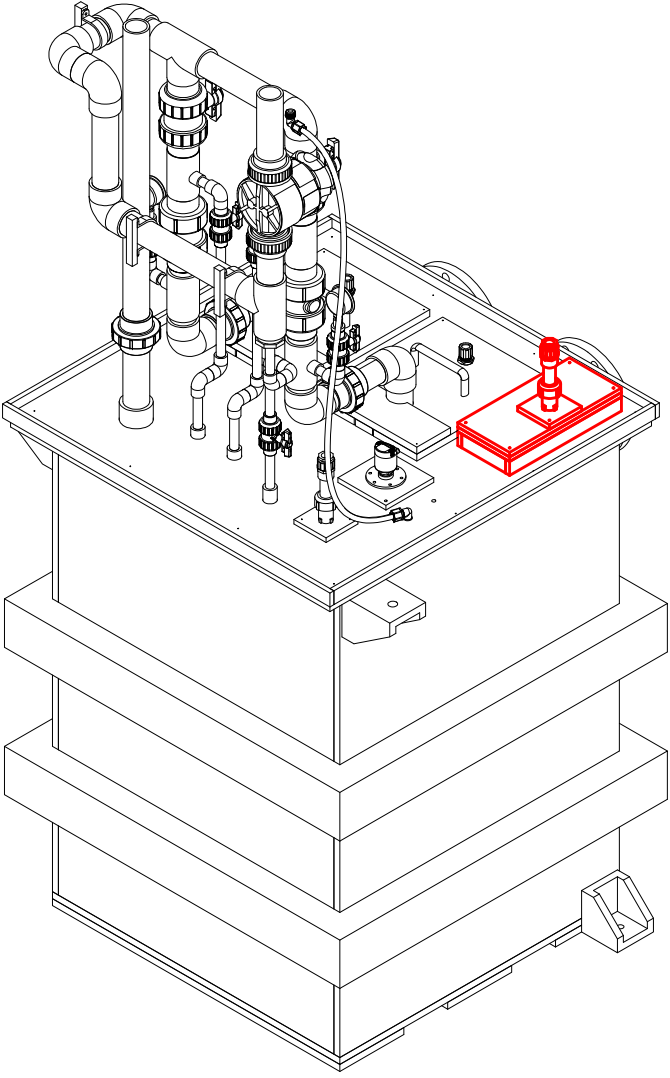
DISCHARGE CONTIANMENT DRAIN



ELEVATION VIEW



FRONT ISOMETRIC VIEW



REAR ISOMETRIC VIEW

NOZZLE SCHEDULE			
NOZZLE	DESCRIPTION	QTY	SERVICE
N1	6" FLANGE	2	INLET
N2	2" FNPT	1	VENT
N3	3" FNPT	1	PUMPED DISCHARGE
N4	6" FLANGE	1	DOUBLE CONTAINMENT
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DRAWN BY:	MM	12/12/2014
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ENGINEERING MANAGER:	SS	

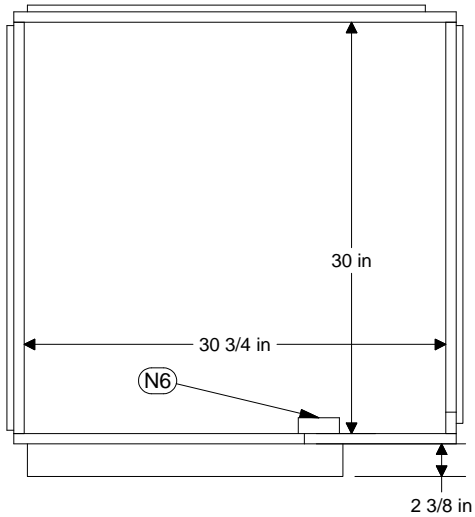
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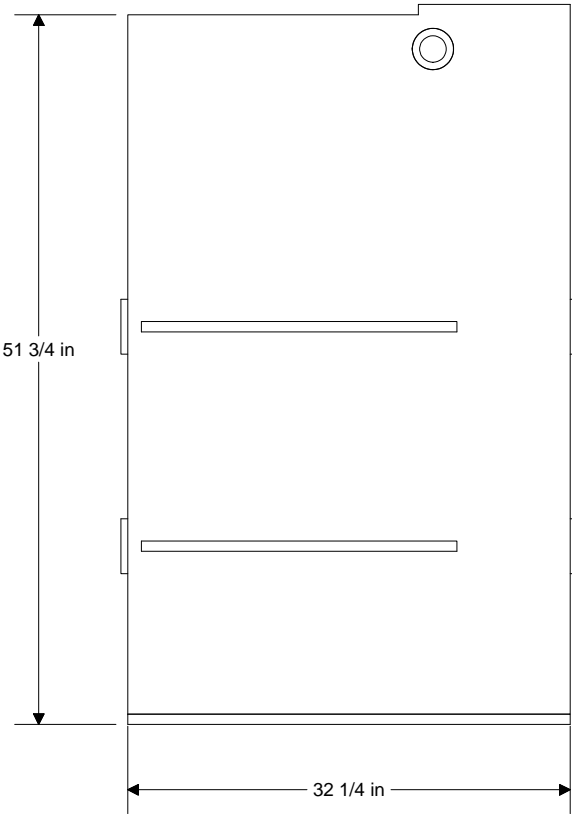
TITLE:	ARIA ACID WASTE PUMP LIFT STATION (AW-LS) MECHANICAL GENERAL ARRANGEMENT	REVISION 3
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SIZE B	DWG. NO. 141190-MG-902
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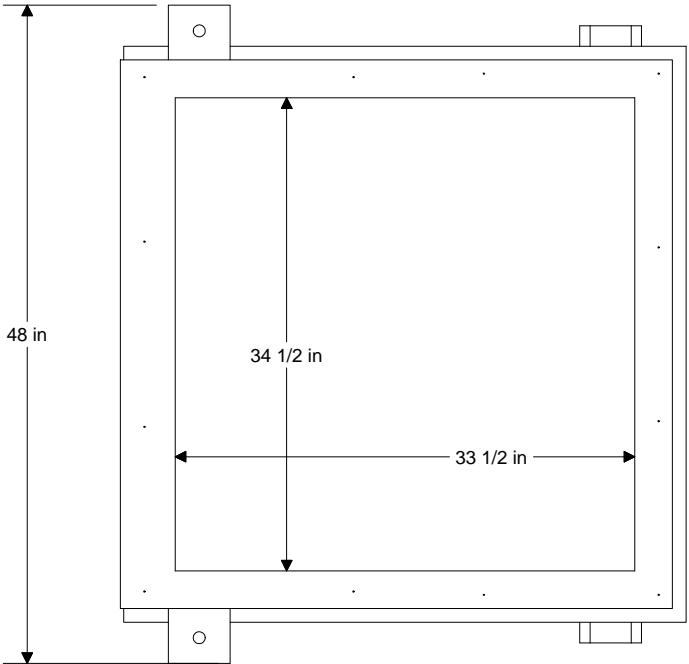


PLAN VIEW

PRIMARY TANK
VOLUME: 203 GAL

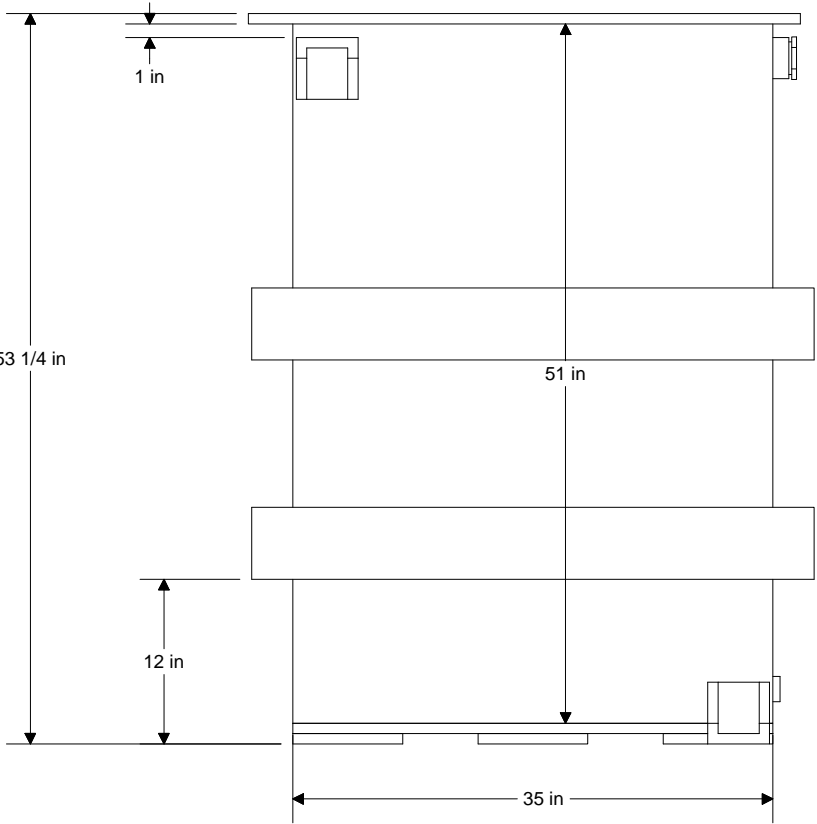


ELEVATION VIEW



PLAN VIEW

CONTAINMENT TANK
VOLUME: 255 GAL



ELEVATION VIEW

NOZZLE SCHEDULE			
NOZZLE	DESCRIPTION	QTY	SERVICE
N1	6" FLANGE	2	INLET
N2	2" FNPT	1	VENT
N3	3" FNPT	1	PUMPED DISCHARGE
N4	6" FLANGE	1	DOUBLE CONTAINMENT
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REV.	DATE:	BY:	DESCRIPTION
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2	3/31/2015	MM	ISSUED FOR FABRICATION
1	1/22/2015	MM	RESUBMITTED FOR APPROVAL
0	12/12/2014	MM	SUBMITTED FOR APPROVAL

APPROVALS		DATE
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PROJECT ENG.: SS		
ENGINEERING MANAGER: SS		

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SIZE B	DWG. NO. 141190-MG-903
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ATTACHMENT 2

AWN-TNK-010/100/200/300/400 INFORMATION



TOLL FREE 1-888-NEED-FRP

SERIAL #: WT - 14091 - 004

SERVICE: EQUALIZATION WASTEWATER

TANK NUMBER: AWN-TNK-010

DESIGN TEMPERATURE: 120F

SPECIFIC GRAVITY: 1.1

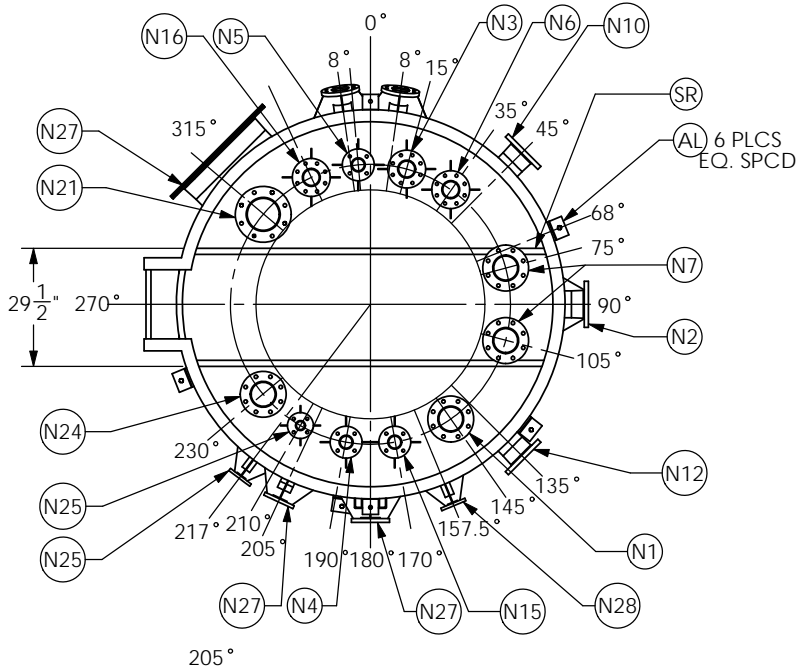
OPERATING PRESSURE: ATMOSPHERIC

MAXIMUM CAPACITY 3,000 GALLONS

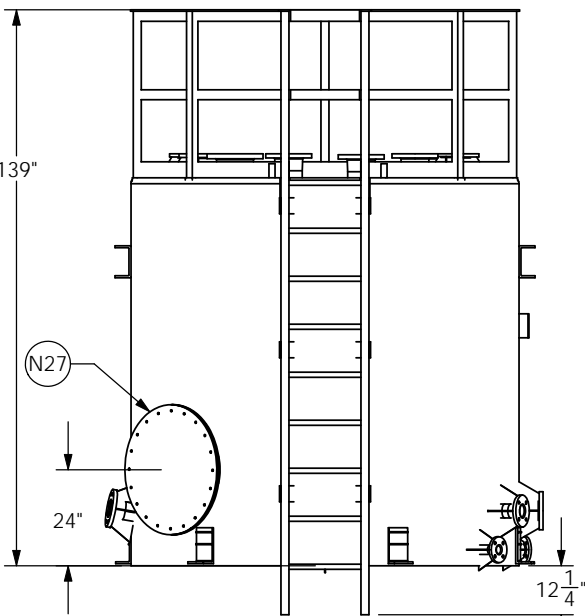
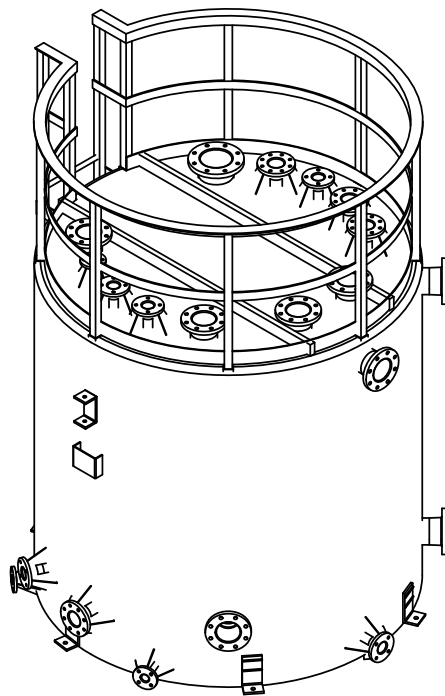
RESIN: HETRON 922

ESTIMATED EMPTY WEIGHT: TBD LBS.

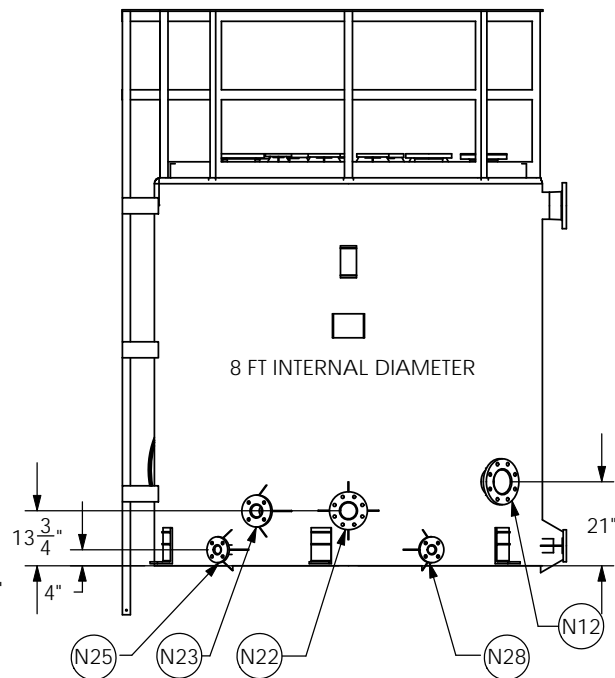
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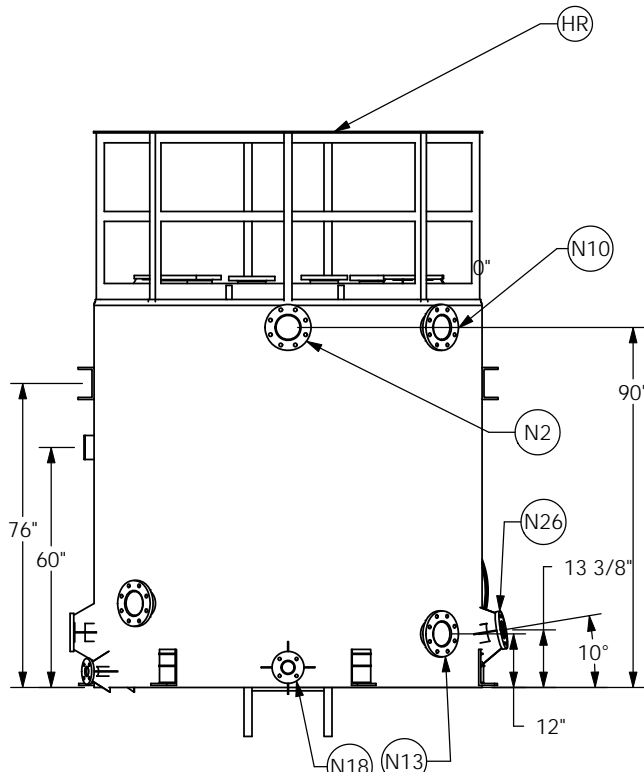
PLAN VIEW



270° ELEVATION



180° ELEVATION



90° ELEVATION

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FRACTIONAL $\pm 1/8$
ANGULAR ± 1 DEGREE
TWO PLACE DECIMAL ± 0.25
THREE PLACE DECIMAL ± 0.13

INTERPRET GEOMETRIC
TOLERANCING PER:
MATERIAL

FINISH

DO NOT SCALE DRAWING

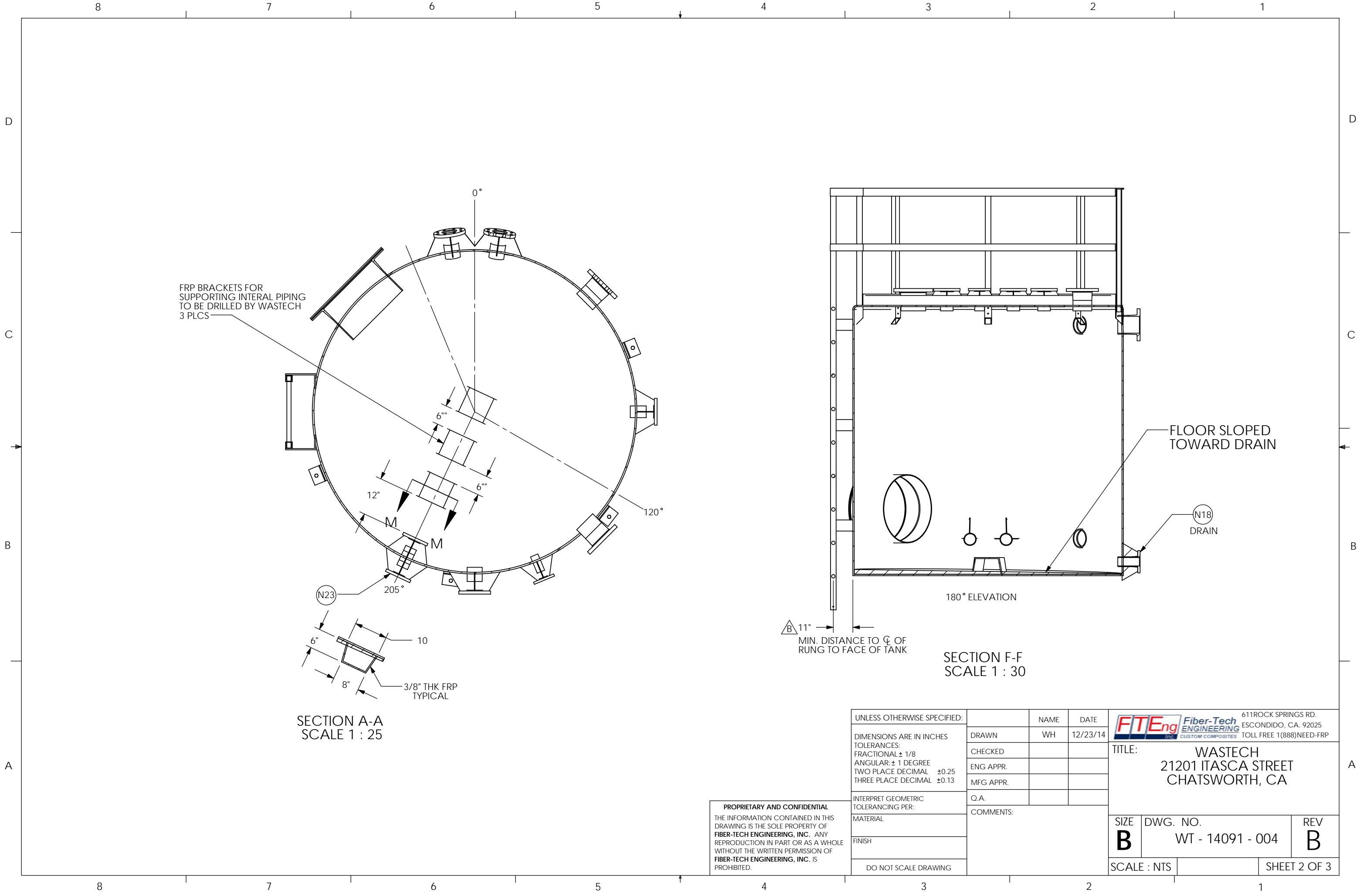
PARTS LIST							
ITEM NO.	SIZE	MATL	SERVICE	DESCRIPTION	PROJ	PSI RATING	QTY
N1	6"	FRP	FF FLANGE	WASTEWATER INL	6"	150	1
N2	6"	FRP	FF FLANGE	WASTEWATER INL	6"	150	1
N3	4"	FRP	FF FLANGE	SPARE	6"	150	1
N4	3"	FRP	FF FLANGE	INLET FROM AMMO	6"	150	1
N5	3"	FRP	FF FLANGE	INLET FROM ACID	6"	150	1
N6	4"	FRP	FF FLANGE	INLET FROM AWW	6"	150	1
N7	6"	FRP	FF FLANGE	CHEMICAL INJECT	6"	150	2
N8	-	-	NOT ON TANK	RESERVED	-	-	-
N9	-	-	NOT ON TANK	RESERVED	-	-	-
N10	6"	FRP	FF FLANGE	OVERFLOW	6"	150	1
N11	-	-	NOT ON TANK	RESERVED	-	-	-
N12	6"	FRP	FF FLANGE	WASTEWATER TO	6"	150	1
N13	6"	FRP	FF FLANGE	WASTEWATER TO	6"	150	1
N14	-	-	NOT ON TANK	RESERVED	-	-	-
N15	3"	FRP	FF FLANGE	SPARE	6"	150	1
N16	4"	FRP	FF FLANGE	VENT	6"	150	1
N17	-	-	NOT ON TANK	RESERVED	-	-	-
N18	3"	FRP	FF FLANGE	TANK DRAIN	6"	150	1
N19	-	-	NOT ON TANK	RESERVED	-	-	-
N20	-	-	NOT ON TANK	RESERVED	-	-	-
N21	8"	FRP	FLANGE W/ COVER	VIEWPORT	6"	150	1
N22	4"	FRP	FF FLANGE	PUMP SUCTION	6"	150	1
N23	3"	FRP	FF FLANGE	EDUCTOR INLET	6"	150	2
N24	6"	FRP	FF FLANGE	SENSOR PORT	6"	150	1
N25	2"	FRP	FF FLANGE	SENSOR PORT	6"	150	2
N26	4"	FRP	FF FLANGE	SENSOR PORT	6"	150	2
N27	24"	FRP	MANWAY W/ COVER	MANWAY	6"	25	1
N28	2"	FRP	FF FLANGE	SPARE	6"	150	1
N29							
HR	-	FRP	-	HANDRAIL ASSY	-	-	1
SR	-	WOOD	-	STIFFENING RIB	-	-	2
LL	-	316SS	-	LIFTING LUG	-	-	2
AL	-	316SS	-	ANCHOR LUG	-	-	6
TL	-	304SS	-	TANK LABEL	-	-	1
-	-	-	-	-	-	-	-

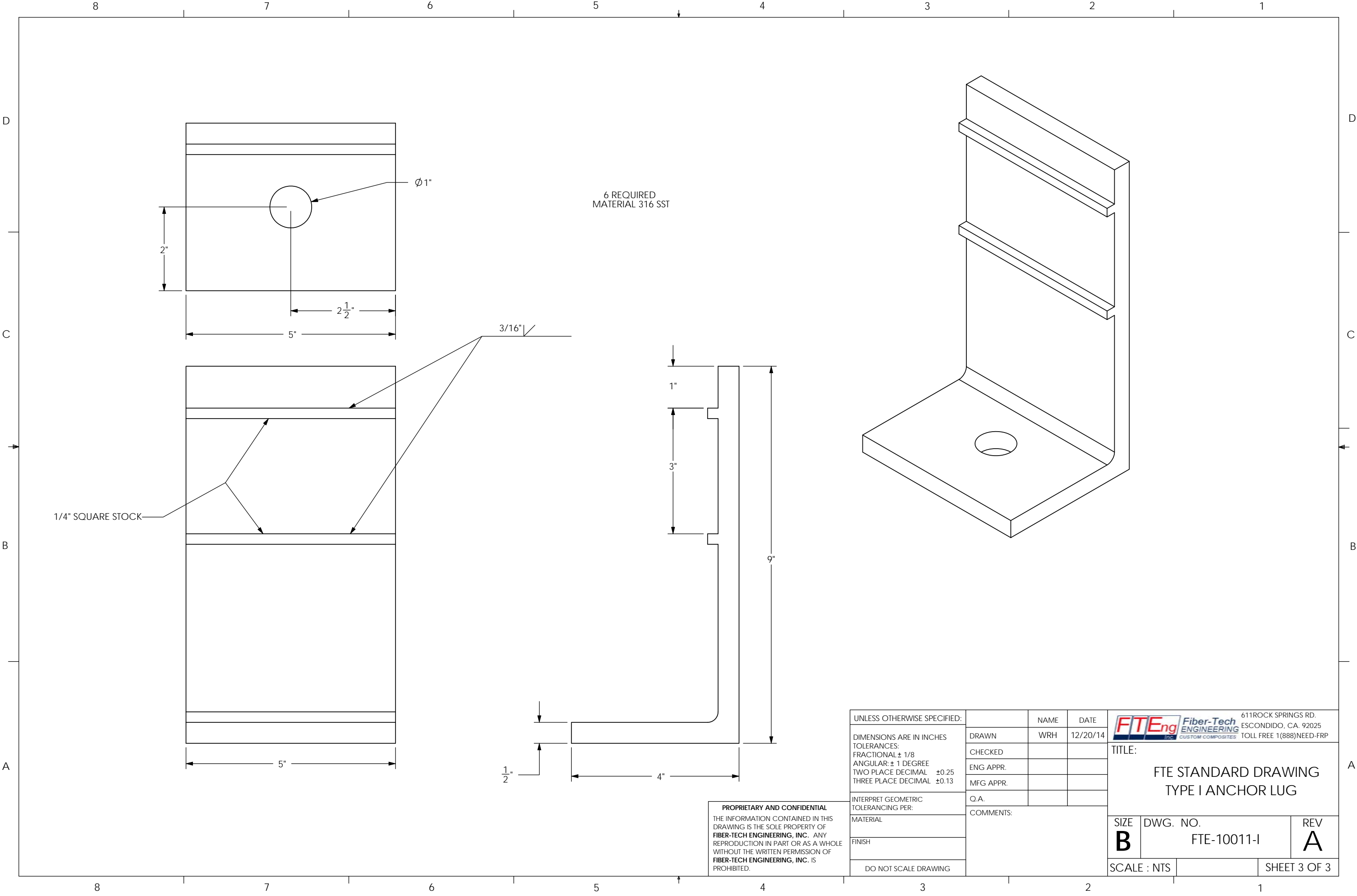
NOTES:
1. BOLT HOLES TO STRADDLE MAJOR CENTERLINES UNLESS OTHERWISE SPECIFIED
2. NOZZLES AND COUPLINGS PROTRUDE 2 INCHES WITHIN INSIDE WALL.
PROJECTION PER NOZZLE SCHEDULE.
3. ALL FLANGED NOZZLES 4" AND SMALLER ARE REINFORCED WITH FOUR 1/4 INCH THICK GUSSE
4. SEE PLAN VIEW FOR TRUE ORIENTATION
5. ALL LIFTING LUGS, ANCHOR LUGS AND FASTENERS ARE STAINLESS STEEL
6. MANWAY GASKET MATERIAL IS EPDM

DESIGN:
SERVICE: EQUALIZATION TANK
FABRICATION STANDARDS: ASTM D 3299 & ASTM D 4097
VISUAL ACCEPTANCE: LEVEL II IAW ASTM D2563
FABRICATION METHOD: FILAMENT WOUND AND HAND LAYUP
SEISMIC ZONE: D
WIND: 115 MPH
DESIGN ROOF LOAD: 250LBS
DESIGN PRESSURE: ATMOSPHERIC
DESIGN VACUUM: ATMOSPHERIC
MAX DESIGN TEMPERATURE: 150 F
SPECIFIC GRAVITY: 1.1
PRESSURE: ATMOSPHERIC
MATERIALS OF CONSTRUCTION: HETRON 922 OR EQUAL
CURE SYSTEM: MEKP
CORROSION BARRIER: 100 MILS NEXUS VEIL
COLOR: WHITE GEL COAT W/UV INHIBITOR
ESTIMATED EMPTY WEIGHT: 1,000 LBS
TANK CAPACITY: 3,000 GALLONS

REVISIONS		
REV	DESCRIPTION	DATE
A	RELEASE FOR FABRICATION	2/5/2015
B	ADDED LADDER RUNG TO TANK FACE MIN. DISTANCE ON SHEET 2	2/25/2015

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	FTEng Fiber-Tech ENGINEERING Inc. CUSTOM COMPOSITES		611 ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1 (888) NEED-FRP	
DRAWN		WH	12/08/14	TITLE:		WASTECH	
CHECKED				21201 ITASCA STREET		CHATSWORTH, CA	
ENG APPR.				REACTION WASTEWATER TANK			
MFG APPR.				SIZE		DWG. NO.	
Q.A.				B		WT - 14091 - 004	
COMMENTS:				REV		B	
SCALE : NTS				SHEET 1 OF 3			







TOLL FREE 1-888-NEED-FRP

SERIAL #: WT - 14091 - 001

SERVICE: REACTION WASTEWATER

TANK NUMBER: AWN-TNK-100

DESIGN TEMPERATURE: 120F

SPECIFIC GRAVITY: 1.1

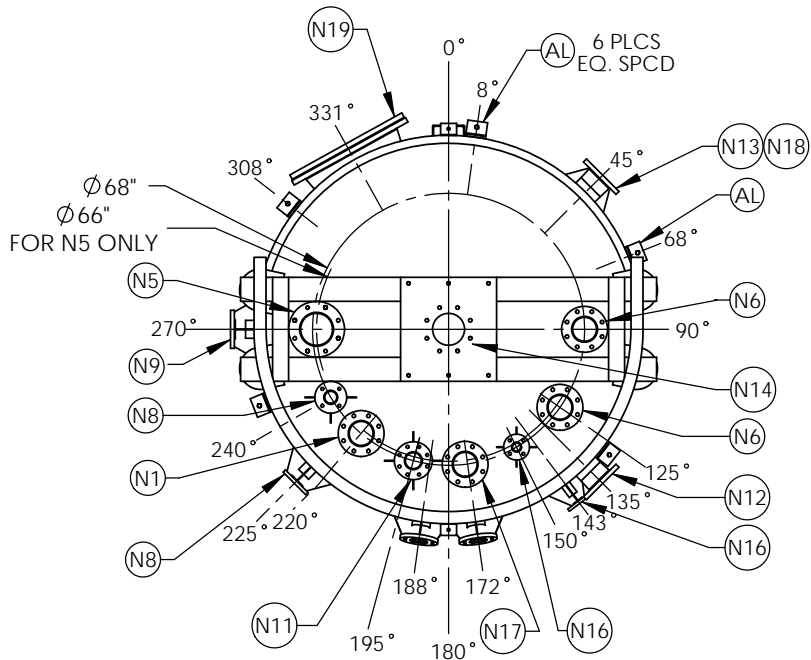
OPERATING PRESSURE: ATMOSPHERIC

MAXIMUM CAPACITY: 3,000 GALLONS

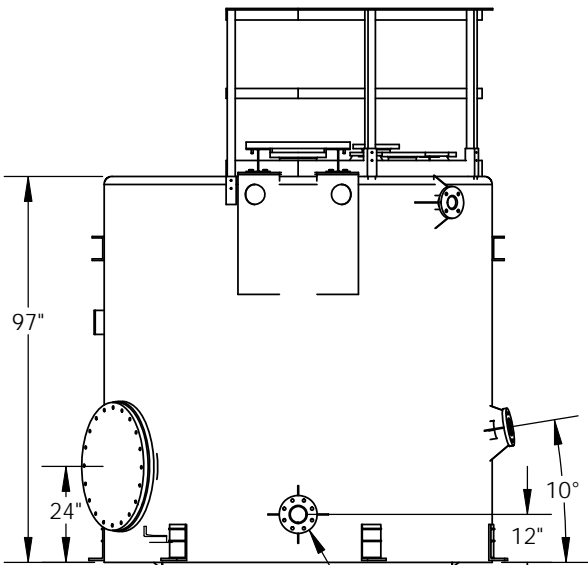
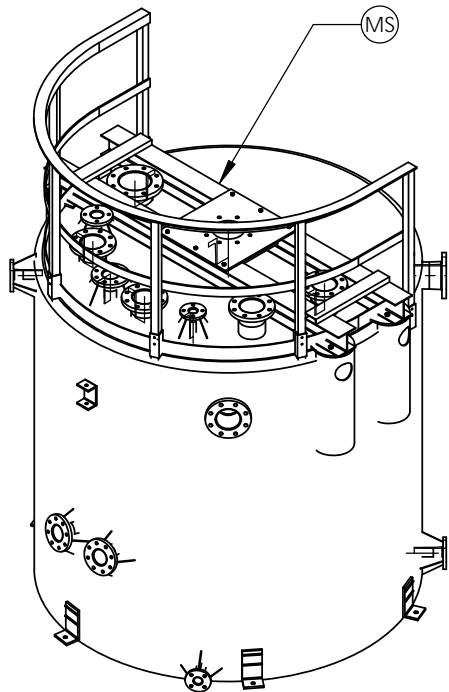
RESIN: HETRON 922

ESTIMATED EMPTY WEIGHT: TBD LBS.

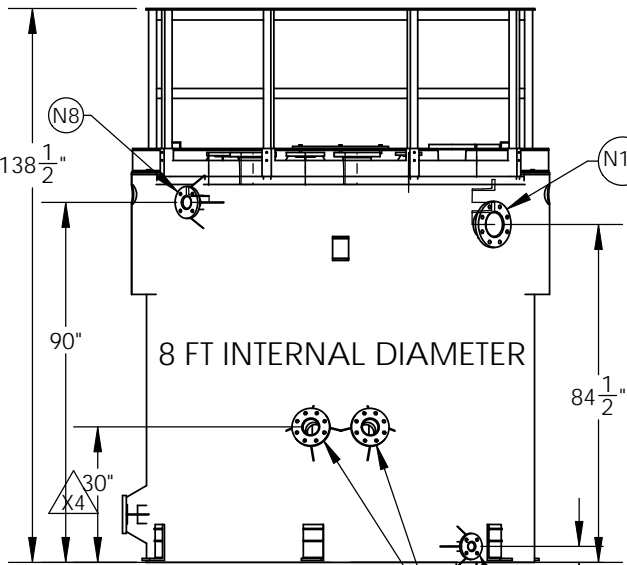
BUILT: JANUARY 2015



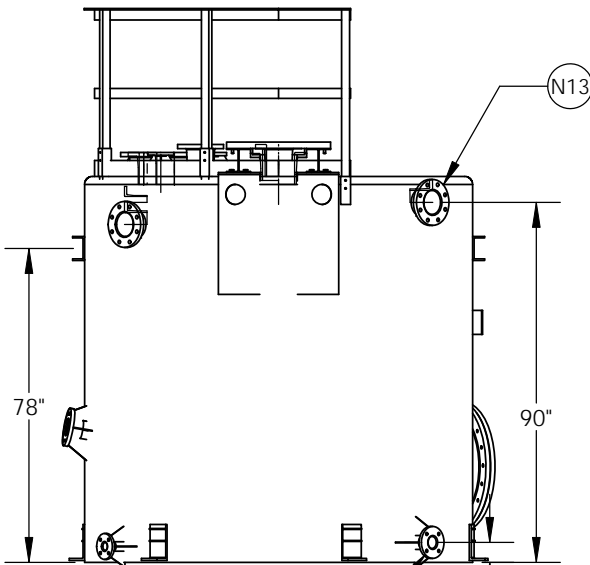
PLAN VIEW



270° ELEVATION



180° ELEVATION



90° ELEVATION

PARTS LIST								
ITEM NO.	SIZE	WALL THK	MATL	SERVICE	DESCRIPTION	PROJ	PSI RATING	QTY
N1	6"	TBD	FRP	WASTEWATER FROM AWN-TNK-010	FF FLANGE	6"	150	1
N2	-	TBD	-	RESERVED	NOT ON TANK	-	-	0
N3	-	5/16"	-	RESERVED	NOT ON TANK	-	-	0
N4	-	5/16"	-	RESERVED	NOT ON TANK	-	-	0
N5	8"	5/16"	FRP	VIEWPORT	FF FLANGE W/COVER	6"	150	1
N6	6"	5/16"	FRP	CHEMICAL INJECTION PORT	FF FLANGE	8"	150	2
N7	-	1/4"	-	RESERVED	NOT ON TANK	-	-	0
N8	3"	-	FRP	SPARE	FF FLANGE	6"	150	2
N9	4"	-	FRP	SPARE	FF FLANGE	6"	150	1
N10	-	-	-	RESERVED	NOT ON TANK	-	-	0
N11	4"	-	FRP	VENT	FF FLANGE	6"	150	1
N12	6"	-	FRP	GRAVITY FLOW TO AWN-TNK-200	FF FLANGE	6"	150	1
N13	6"	-	FRP	OVERFLOW TO AWN-TNK-200	FF FLANGE	6"	150	1
N14	8"	-	FRP	MIXER PORT	FF FLANGE	6"	150	1
N15	4"	-	FRP	SENSOR PORT	FF FLANGE	6"	150	2
N16	2"	-	FRP	SENSOR PORT	FF FLANGE	6"	150	2
N17	6"	-	FRP	SENSOR PORT	FF FLANGE	6"	150	1
N18	3"	-	FRP	TANK DRAIN	FF FLANGE	6"	150	1
N19	24"	-	FRP	MANWAY	24" MANWAY W/COVER	6"	25	1
-	-	-	-	-	-	-	-	-
HR	-	-	FRP	-	HANDRAIL ASSY	-	-	1
MS	-	-	-	-	MIXER SUPPORT ASSY	-	-	1
LL	-	-	316SST	-	LIFTING LUG	-	-	2
AL	-	-	316SST	-	ANCHOR LUG	-	-	6
TL	-	-	304SST	-	TANK LABEL	-	-	1
-	-	-	-	-	-	-	-	-

NOTES:
1. BOLT HOLES TO STRADDLE MAJOR CENTERLINES UNLESS OTHERWISE SPECIFIED
2. NOZZLES AND COUPLINGS PROTRUDE 2 INCHES WITHIN INSIDE WALL. PROJECTION PER NOZZLE SCHEDULE.
3. ALL FLANGED NOZZLES 4" AND SMALLER ARE REINFORCED WITH FOUR 1/4 INCH THICK GUSSET PLATES
4. SEE PLAN VIEW FOR TRUE ORIENTATION
5. ALL LIFTING LUGS, ANCHOR LUGS AND FASTENERS ARE STAINLESS STEEL
6. MANWAY GASKET MATERIAL IS EPDM

DESIGN:	REACTION WASTEWATER TANK
SERVICE:	ASTM D 3299 & ASTM D 4097
FABRICATION STANDARDS:	LEVEL II IAW ASTM D2563
VISUAL ACCEPTANCE:	FILAMENT WOUND AND HAND LAYUP
FABRICATION METHOD:	D
SEISMIC ZONE:	115 MPH
WIND:	250LBS
DESIGN ROOF LOAD:	ATMOSPHERIC
DESIGN PRESSURE:	ATMOSPHERIC
DESIGN VACUUM:	150 F
MAX DESIGN TEMPERATURE:	1.1
SPECIFIC GRAVITY:	ATMOSPHERIC
PRESSURE:	HETRON 922 OR EQUAL
MATERIALS OF CONSTRUCTION:	MEKP
CURE SYSTEM:	100 MILS NEXUS VEIL
CORROSION BARRIER:	WHITE GEL COAT W/UV INHIBITOR
COLOR:	1,000 LBS
ESTIMATED EMPTY WEIGHT:	3,000 GALLONS
TANK CAPACITY:	

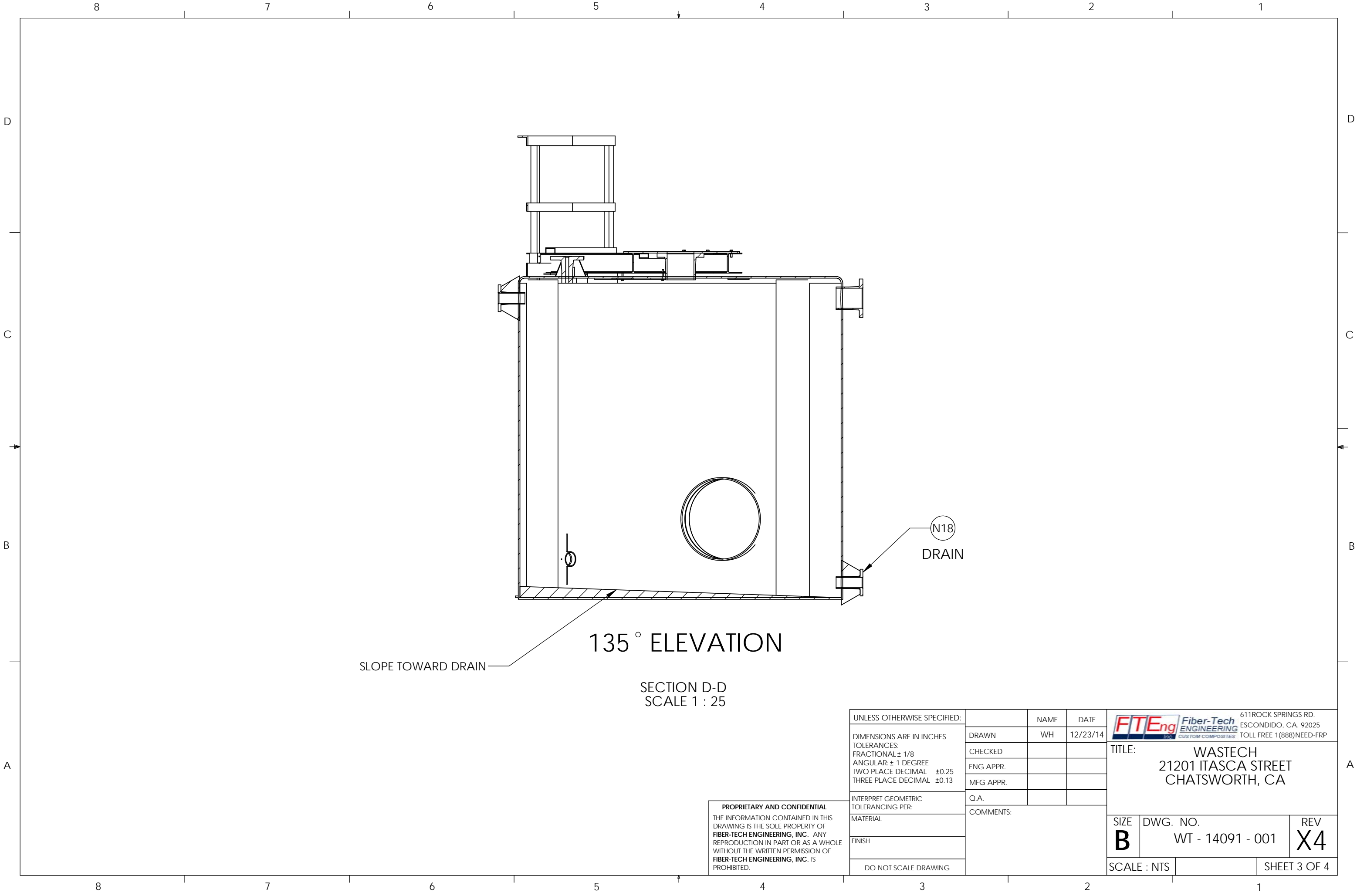
REVISIONS		
REV	DESCRIPTION	DATE
X2	RELEASE FOR APPROVAL	1/22/2015
X3	SYNCD NOZZLE SCHEDULE AND NOTES TO WASTECH DRAWING REV 3	2/2/2015
X4	30" DIMENSION FOR N15 NOZZLES IN 180 DEGREE ELEVATION VIEW, WAS 33"	2/2/2015

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 611 ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP
DIMENSIONS ARE IN INCHES		DRAWN	WH	
TOLERANCES:		CHECKED		
FRACTIONAL ± 1/8		ENG APPR.		
ANGULAR: ± 1 DEGREE		MFG APPR.		
TWO PLACE DECIMAL ±0.25		Q.A.		TITLE: WASTECH 21201 ITASCA STREET CHATSWORTH, CA REACTION WASTEWATER TANK
THREE PLACE DECIMAL ±0.13		COMMENTS:		
INTERPRET GEOMETRIC TOLERANCING PER:				
MATERIAL				SIZE DWG. NO. REV
FINISH				B WT - 14091 - 001 X4
DO NOT SCALE DRAWING				SCALE : NTS SHEET 1 OF 4

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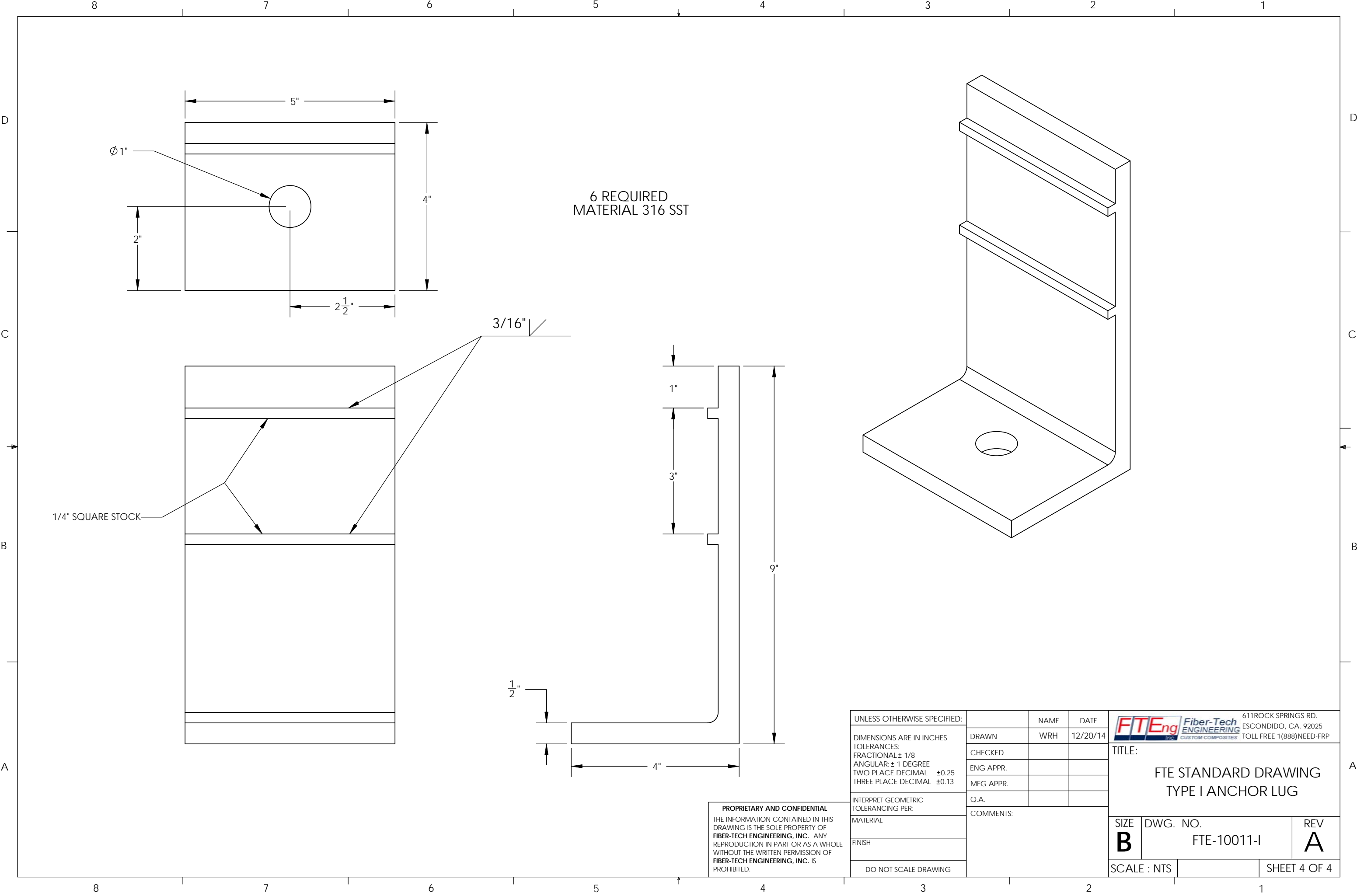


<div>PROPRIETARY AND CONFIDENTIAL</div> <div>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIBER-TECH ENGINEERING, INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIBER-TECH ENGINEERING, INC. IS PROHIBITED.</div>	UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div><div>FTEng</div><div>Fiber-Tech ENGINEERING</div><div>INC. CUSTOM COMPOSITES</div></div><div>611ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP</div></div>			
	DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/8 ANGULAR: ± 1 DEGREE TWO PLACE DECIMAL ±0.25 THREE PLACE DECIMAL ±0.13	DRAWN	WH	12/23/14	TITLE: WASTECH 21201 ITASCA STREET CHATSORTH, CA			
		CHECKED						
		ENG APPR.						
	MFG APPR.							
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.							
MATERIAL	COMMENTS:				SIZE	DWG. NO.	REV	
FINISH					B	WT - 14091 - 001	X4	
DO NOT SCALE DRAWING				SCALE : NTS			SHEET 2 OF 4	



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UNLESS OTHERWISE SPECIFIED:			NAME	DATE	<div><div><div><div>FTEng</div><div>Fiber-Tech</div><div>ENGINEERING</div><div>INC.</div></div><div>CUSTOM COMPOSITES</div></div><div>611ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP</div></div>		
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/8 ANGULAR: ± 1 DEGREE TWO PLACE DECIMAL ±0.25 THREE PLACE DECIMAL ±0.13		DRAWN	WH	12/23/14	TITLE: WASTECH 21201 ITASCA STREET CHATSWORTH, CA		
		CHECKED					
		ENG APPR.					
		MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.			SIZE DWG. NO. REV B WT - 14091 - 001 X4		
MATERIAL		COMMENTS:					
FINISH							
DO NOT SCALE DRAWING					SCALE : NTS		SHEET 3 OF 4



UNLESS OTHERWISE SPECIFIED:			NAME	DATE	<div><div><div><div>FTEEng</div><div>Fiber-Tech</div><div>ENGINEERING</div><div>INC.</div></div><div>CUSTOM COMPOSITES</div></div><div>611ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP</div></div>		
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/8 ANGULAR: ± 1 DEGREE TWO PLACE DECIMAL ±0.25 THREE PLACE DECIMAL ±0.13		DRAWN	WRH	12/20/14	TITLE: FTE STANDARD DRAWING TYPE I ANCHOR LUG		
		CHECKED					
		ENG APPR.					
		MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.						
MATERIAL	COMMENTS:			SIZE		DWG. NO.	REV
B				FTE-10011-I		A	
SCALE : NTS				SHEET 4 OF 4			
FINISH							
DO NOT SCALE DRAWING							



TOLL FREE 1-888-NEED-FRP

SERIAL #: WT - 14091 - 002

SERVICE: REACTION WASTEWATER

TANK NUMBER: AWN-TNK-200

DESIGN TEMPERATURE: 120F

SPECIFIC GRAVITY: 1.1

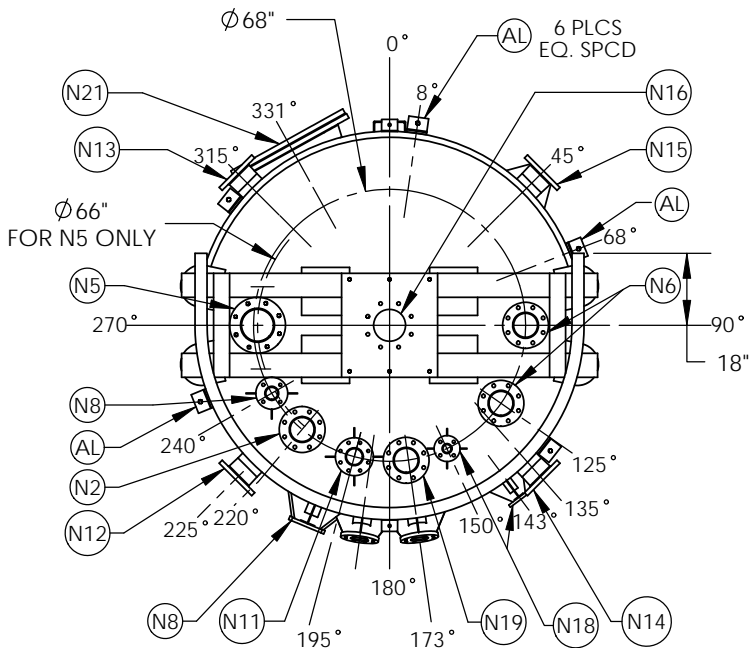
OPERATING PRESSURE: ATMOSPHERIC

MAXIMUM CAPACITY: 3,000 GALLONS

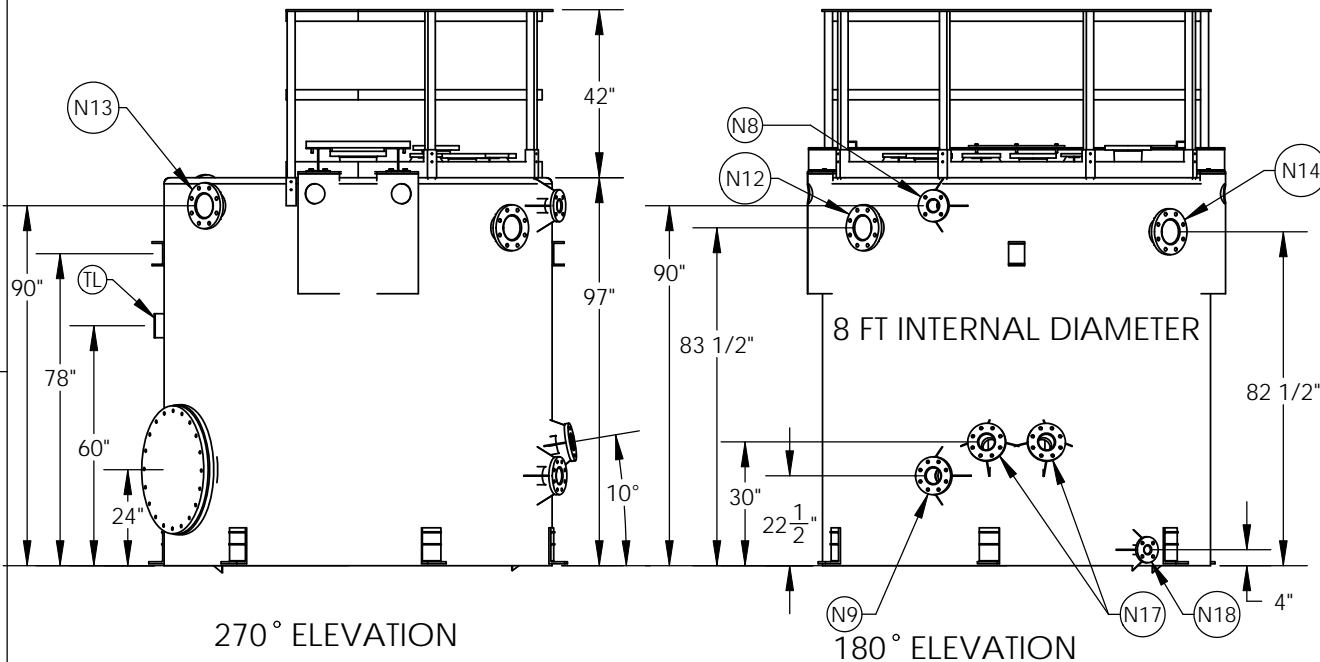
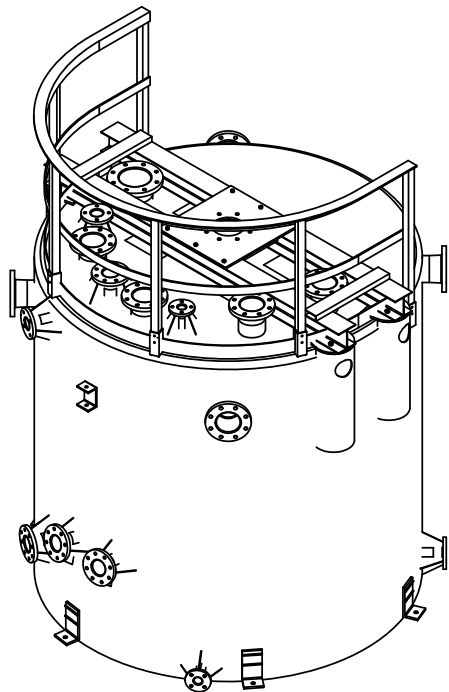
RESIN: HETRON 922

ESTIMATED EMPTY WEIGHT: 1,200 LBS.

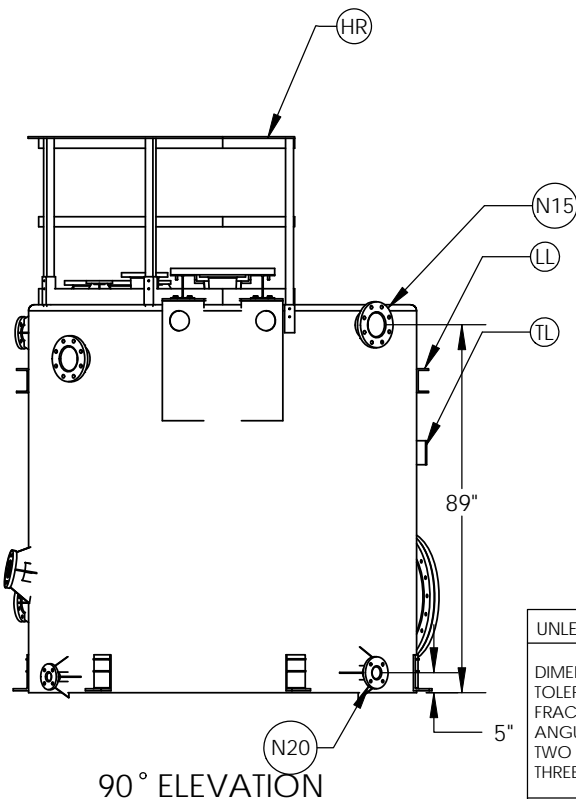
BUILT: JANUARY 2015



PLAN VIEW



270° ELEVATION



90° ELEVATION

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FIBER-TECH ENGINEERING, INC. IS
PROHIBITED.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/8$
ANGULAR: ± 1 DEGREE
TWO PLACE DECIMAL ± 0.25
THREE PLACE DECIMAL ± 0.13

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH


DO NOT SCALE DRAWING

ITEM NO.	SIZE	MATL	SERVICE	DESCRIPTION	PROJ	PSI RATING	QTY
N1	-	-	RESERVED	NOT ON TANK	-	-	0
N2	6"	FRP	SPARE	FF FLANGE	6"	150	1
N3	-	-	RESERVED	NOT ON TANK	-	-	0
N4	-	-	RESERVED	NOT ON TANK	-	-	0
N5	8"	FRP	VIEWPORT	8" FLANGE W/ COVER	6"	150	1
N6	6"	FRP	CHEMICAL INJECTION PORT	FF FLANGE	8"	150	2
N7	-	-	RESERVED	NOT ON TANK	-	-	0
N8	3"	FRP	SPARE	FF FLANGE	6"	150	2
N9	4"	FRP	SPARE	FF FLANGE	6"	150	1
N10	-	-	RESERVED	NOT ON TANK	-	-	0
N11	4"	FRP	VENT	FF FLANGE	6"	150	1
N12	6"	FRP	GRAVITY FLOW FROM AWN-TNK-100	FF FLANGE	6"	150	1
N13	6"	FRP	OVERFLOW FROM AWN-TNK-100	FF FLANGE	6"	150	1
N14	6"	FRP	GRAVITY FLOW TO AWN-TNK-300	FF FLANGE	6"	150	1
N15	6"	FRP	OVERFLOW TO AWN-TNK-300	FF FLANGE	6"	150	1
N16	8"	FRP	MIXER PORT (SEE NOTES FOR LO	FF FLANGE	6"	150	1
N17	8"	FRP	SENSOR PORT	FF FLANGE	6"	150	2
N18	2"	FRP	SENSOR PORT	FF FLANGE	6"	150	2
N19	6"	FRP	SENSOR PORT	FF FLANGE	6"	150	1
N20	3"	FRP	TANK DRAIN	FF FLANGE	6"	150	1
N21	24"	FRP	MANWAY	24" FLANGE W/ COVER	6"	25	1
-	-	-	-	-	-	-	-
HR	-	FRP	-	HANDRAIL ASSY	-	-	1
MS	-	-	-	MIXER SUPPORT ASSY	-	-	1
LL	-	316SST	-	LIFTING LUG	-	-	2
AL	-	316SST	-	ANCHOR LUG	-	-	6
TL	-	304SST	-	TANK LABEL	-	-	1
-	-	-	-	-	-	-	-

- NOTES:
- BOLT HOLES TO STRADDLE MAJOR CENTERLINES UNLESS OTHERWISE SPECIFIED
 - NOZZLES AND COUPLINGS PROTRUDE 2 INCHES WITHIN INSIDE WALL. PROJECTION PER NOZZLE SCHEDULE.
 - ALL FLANGED NOZZLES 4" AND SMALLER ARE REINFORCED WITH FOUR 1/4 INCH THICK GUSSET PLATE
 - SEE PLAN VIEW FOR TRUE ORIENTATION
 - ALL LIFTING LUGS, ANCHOR LUGS AND FASTENERS ARE STAINLESS STEEL
 - MANWAY GASKET MATERIAL IS EPDM

DESIGN:	
SERVICE:	REACTION WASTEWATER TANK
FABRICATION STANDARDS:	ASTM D 3299 & ASTM D 4097
VISUAL ACCEPTANCE:	LEVEL II IAW ASTM D2563
FABRICATION METHOD:	FILAMENT WOUND AND HAND LAYUP
SEISMIC ZONE:	D
WIND:	115 MPH
DESIGN ROOF LOAD:	250LBS
DESIGN PRESSURE:	ATMOSPHERIC
DESIGN VACUUM:	ATMOSPHERIC
MAX DESIGN TEMPERATURE:	150 F
SPECIFIC GRAVITY:	1.1
PRESSURE:	ATMOSPHERIC
MATERIALS OF CONSTRUCTION:	HETRON 922 OR EQUAL
CURE SYSTEM:	MEKP
CORROSION BARRIER:	100 MILS NEXUS VEIL
COLOR:	WHITE GEL COAT W/UV INHIBITOR
ESTIMATED EMPTY WEIGHT:	1,000 LBS
TANK CAPACITY:	3,000 GALLONS

REVISIONS		
REV	DESCRIPTION	DATE
X2	RELEASE FOR APPROVAL	1/22/2015
X3	SYNCED NOZZLE SCHEDULE AND NOTES TO WASTECH DRAWING REV 3	2/2/2015
X4	DIMENSION AND NOTED CLARIFICATION	2/4/2015

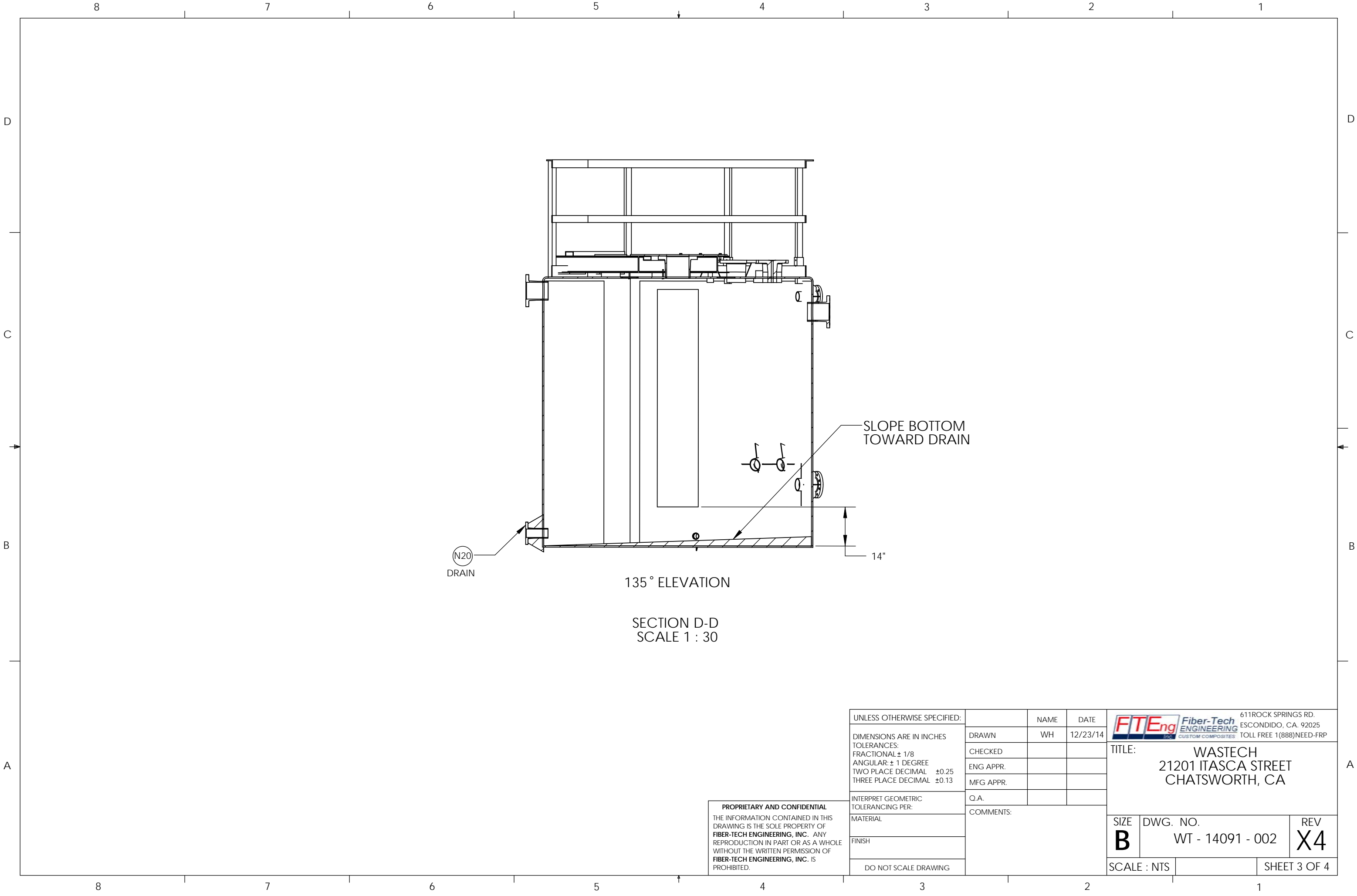
UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div>611 ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP</div>	
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/8 ANGULAR: ± 1 DEGREE TWO PLACE DECIMAL ±0.25 THREE PLACE DECIMAL ±0.13	DRAWN	WH	12/08/14	TITLE: WASTECH 21201 ITASCA STREET CHATSWORTH, CA REACTION WASTEWATER TANK	
	CHECKED				
	ENG APPR.				
	MFG APPR.				
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B WT - 14091 - 002 X4	
MATERIAL	COMMENTS:				
FINISH					
DO NOT SCALE DRAWING				SCALE : NTS	SHEET 1 OF 4



UNLESS OTHERWISE SPECIFIED:		NAME	DATE	  611 ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP	
DIMENSIONS ARE IN INCHES	DRAWN	WH	12/23/14	TITLE: WASTECH 21201 ITASCA STREET CHATSORTH, CA	
TOLERANCES:	CHECKED				
FRACTIONAL $\pm 1/8$	ENG APPR.				
ANGULAR: ± 1 DEGREE	MFG APPR.				
TWO PLACE DECIMAL ± 0.25				SIZE DWG. NO. REV B WT - 14091 - 002 X4	
THREE PLACE DECIMAL ± 0.13					
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.				
MATERIAL	COMMENTS:				
FINISH				SCALE : NTS	
DO NOT SCALE DRAWING				SHEET 2 OF 4	

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(N20)
DRAIN

SLOPE BOTTOM
TOWARD DRAIN

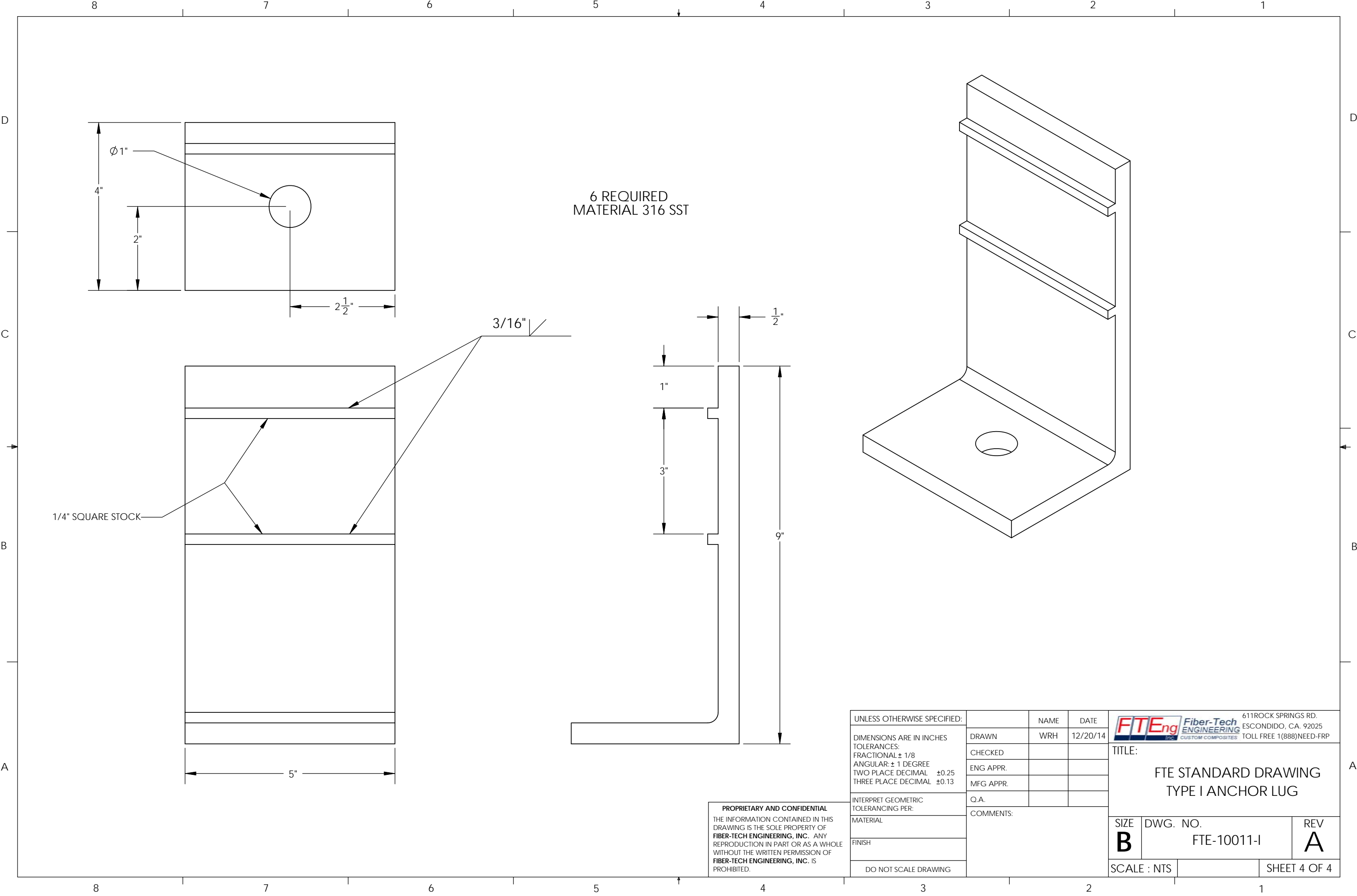
14"

135 ° ELEVATION

SECTION D-D
SCALE 1 : 30

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UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div><div><div>FTEng</div><div>Fiber-Tech</div><div>ENGINEERING</div><div>INC.</div></div><div>CUSTOM COMPOSITES</div></div><div>611ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP</div></div>		
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/8 ANGULAR: ± 1 DEGREE TWO PLACE DECIMAL ±0.25 THREE PLACE DECIMAL ±0.13	DRAWN	WH	12/23/14	TITLE: WASTECH 21201 ITASCA STREET CHATSORTH, CA		
	CHECKED					
	ENG APPR.					
	MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			COMMENTS:		
MATERIAL						
FINISH						
DO NOT SCALE DRAWING				SIZE B	DWG. NO. WT - 14091 - 002	REV X4
				SCALE : NTS		SHEET 3 OF 4



UNLESS OTHERWISE SPECIFIED:		NAME		DATE		<div><div><div><div><div>FTE</div><div>Eng</div></div><div>INC</div></div><div><div>Fiber-Tech</div><div>ENGINEERING</div><div>CUSTOM COMPOSITES</div></div></div><div>611 ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP</div></div>			
DIMENSIONS ARE IN INCHES		DRAWN	WRH	12/20/14		TITLE: FTE STANDARD DRAWING TYPE I ANCHOR LUG			
TOLERANCES:		CHECKED							
FRACTIONAL ± 1/8		ENG APPR.							
ANGULAR: ± 1 DEGREE		MFG APPR.							
TWO PLACE DECIMAL ±0.25									
THREE PLACE DECIMAL ±0.13									
INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.			SIZE B		DWG. NO. FTE-10011-I		REV A
MATERIAL		COMMENTS:							
FINISH					SCALE : NTS				SHEET 4 OF 4
DO NOT SCALE DRAWING									



TOLL FREE 1-888-NEED-FRP

SERIAL #: WT - 14091 - 003

SERVICE: REACTION WASTEWATER

TANK NUMBER: AWN-TNK-300

DESIGN TEMPERATURE: 120F

SPECIFIC GRAVITY: 1.1

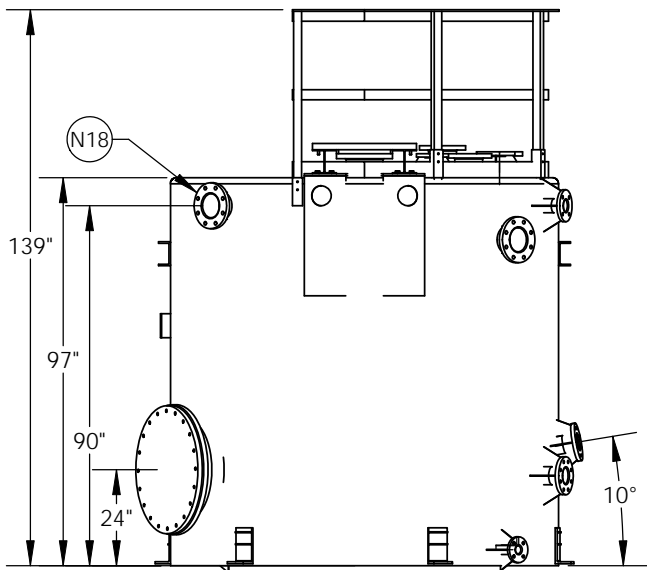
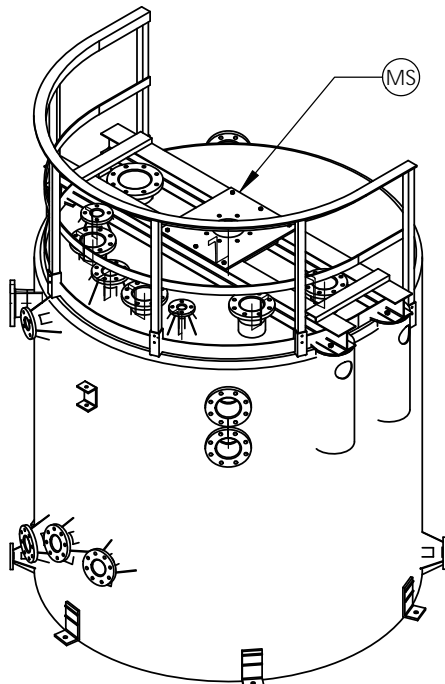
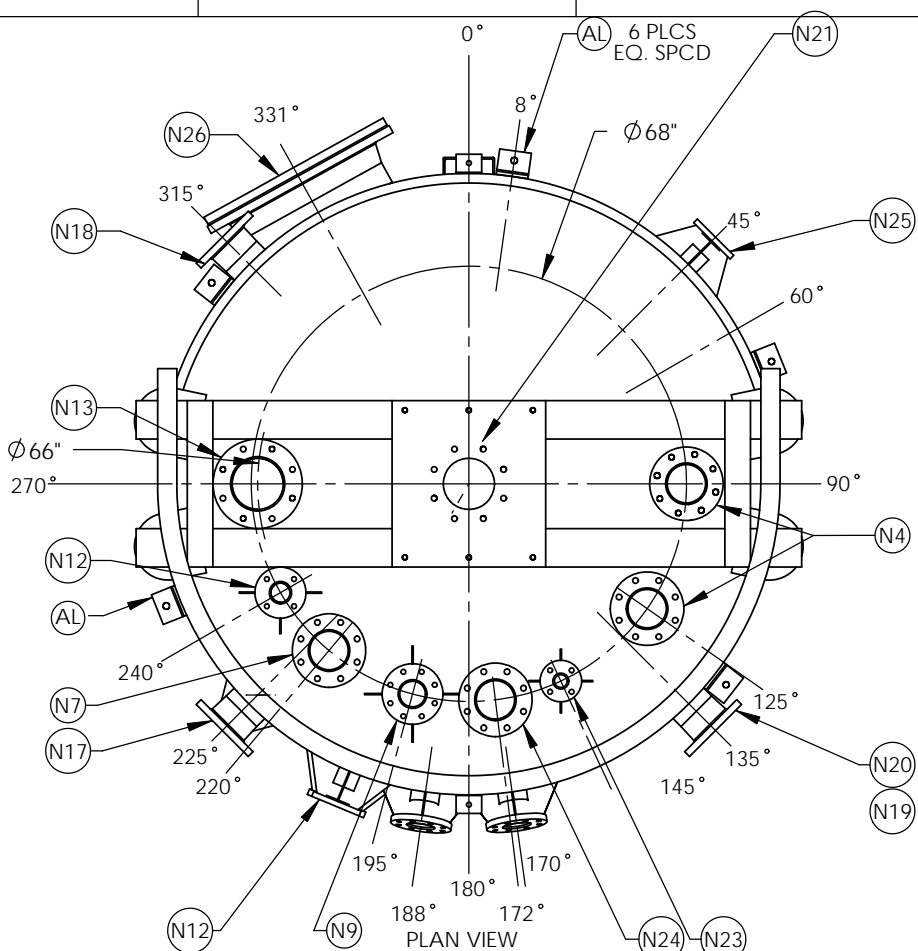
OPERATING PRESSURE: ATMOSPHERIC

MAXIMUM CAPACITY: 3,000 GALLONS

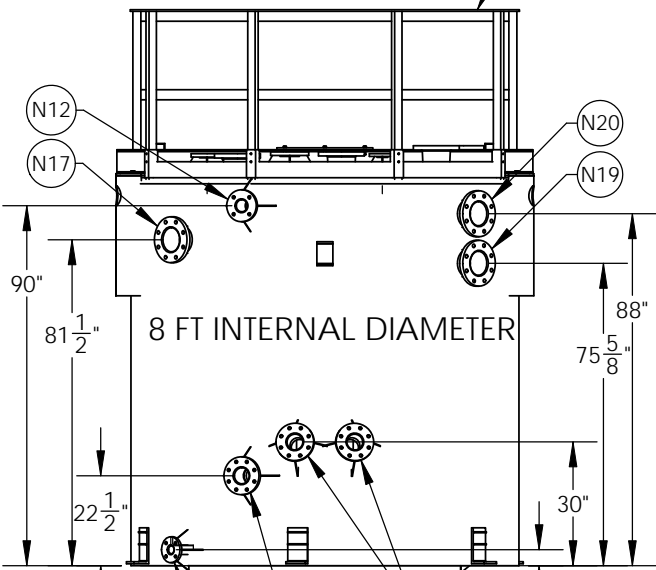
RESIN: HETRON 922

ESTIMATED EMPTY WEIGHT: TBD LBS.

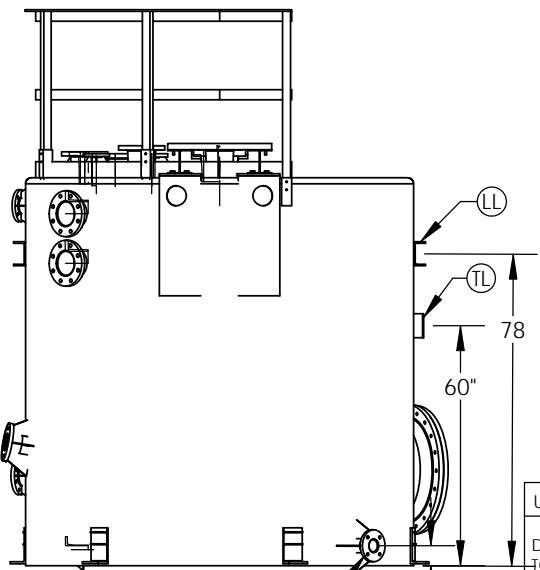
BUILT: JANUARY 2015



270° ELEVATION



180° ELEVATION



90° ELEVATION

PARTS LIST							
ITEM NO.	SIZE	MATL	SERVICE	DESCRIPTION	PROJ	PSI RATING	QTY
N1	-	-	RESERVED	NOT ON TANK	-	-	-
N2	-	-	RESERVED	NOT ON TANK	-	-	-
N3	-	-	RESERVED	NOT ON TANK	-	-	-
N4	6"	FRP	CHEMICAL INJECTION PORT	FF FLANGE	6"	150	2
N5	-	-	RESERVED	NOT ON TANK	-	-	-
N6	4"	FRP	SPARE	FF FLANGE	6"	150	1
N7	6"	FRP	SPARE	FF FLANGE	6"	150	1
N8	-	-	RESERVED	NOT ON TANK	-	-	-
N9	4"	FRP	VENT	FF FLANGE	6"	150	1
N10	-	-	RESERVED	NOT ON TANK	-	-	-
N11	-	-	RESERVED	NOT ON TANK	-	-	-
N12	3"	FRP	SPARE	FF FLANGE	6"	150	2
N13	8"	FRP	VIEWPORT	FF FLANGE W/ COVER	6"	150	1
N14	-	-	RESERVED	NOT ON TANK	-	-	-
N15	-	-	RESERVED	NOT ON TANK	-	-	-
N16	-	-	RESERVED	NOT ON TANK	-	-	-
N17	6"	FRP	GRAVITY FLOW FROM AWN-TNK-200	FF FLANGE	6"	150	1
N18	6"	FRP	OVERFLOW FROM AWN-TNK-200	FF FLANGE	6"	150	1
N19	6"	FRP	GRAVITY FLOW TO AWN-TNK-400	FF FLANGE	6"	150	1
N20	6"	FRP	OVERFLOW TO AWN-TNK-400	FF FLANGE	6"	150	1
N21	8"	FRP	PORT (SEE NOTES FOR LOAD CR)	FF FLANGE	6"	150	1
N22	4"	FRP	SENSOR PORT	FF FLANGE	6"	150	2
N23	2"	FRP	SENSOR PORT	FF FLANGE	6"	150	2
N24	6"	FRP	SENSOR PORT	FF FLANGE	6"	150	1
N25	3"	FRP	TANK DRAIN	FF FLANGE	6"	150	1
N26	24"	FRP	MANWAY	24" FLANGE W/	6"	25	1
HR	-	FRP	-	HANDRAIL ASSY	-	-	1
MS	-	-	-	MIXER SUPPORT	-	-	1
LL	-	316SS	-	LIFTING LUG	-	-	2
AL	-	316SS	-	ANCHOR LUG	-	-	6
TL	-	304SS	-	TANK LABEL	-	-	1
-	-	-	-	-	-	-	-

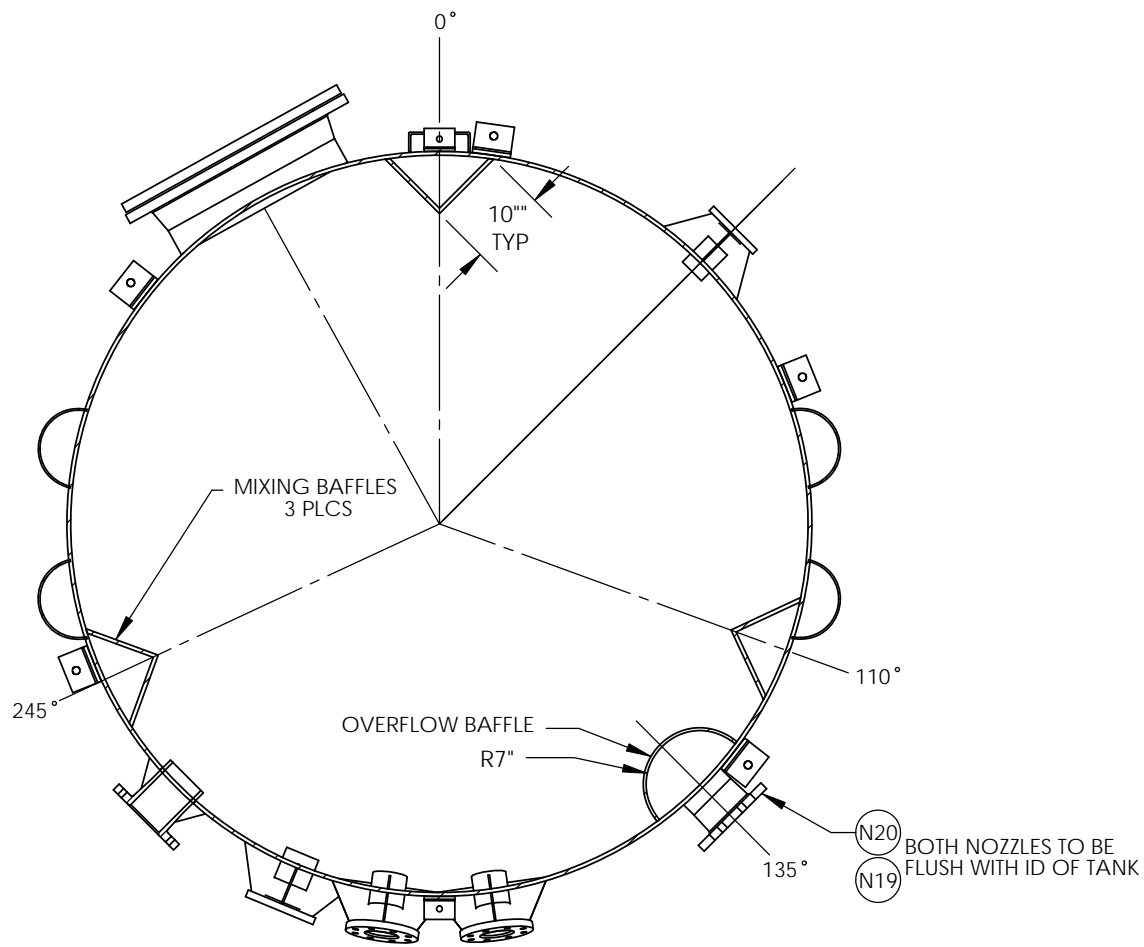
NOTES:
1. BOLT HOLES TO STRADDLE MAJOR CENTERLINES UNLESS OTHERWISE SPECIFIED
2. NOZZLES AND COUPLINGS PROTRUDE 2 INCHES WITHIN INSIDE WALL.
PROJECTION PER NOZZLE SCHEDULE.
3. ALL FLANGED NOZZLES 4" AND SMALLER ARE REINFORCED WITH FOUR 1/4 INCH THICK GUSSE
4. SEE PLAN VIEW FOR TRUE ORIENTATION
5. ALL LIFTING LUGS, ANCHOR LUGS AND FASTENERS ARE STAINLESS STEEL
6. MANWAY GASKET MATERIAL IS EPDM

DESIGN:
SERVICE: REACTION WASTEWATER TANK
FABRICATION STANDARDS: ASTM D 3299 & ASTM D 4097
VISUAL ACCEPTANCE: LEVEL II IAW ASTM D2563
FABRICATION METHOD: FILAMENT WOUND AND HAND LAYUP
SEISMIC ZONE: D
WIND: 115 MPH
DESIGN ROOF LOAD: 250LBS
DESIGN PRESSURE: ATMOSPHERIC
DESIGN VACUUM: ATMOSPHERIC
MAX DESIGN TEMPERATURE: 150 F
SPECIFIC GRAVITY: 1.1
PRESSURE: ATMOSPHERIC
MATERIALS OF CONSTRUCTION: HETRON 922 OR EQUAL
CURE SYSTEM: MEKP
CORROSION BARRIER: 100 MILS NEXUS VEIL
COLOR: WHITE GEL COAT W/UV INHIBITOR
ESTIMATED EMPTY WEIGHT: 1,000 LBS
TANK CAPACITY: 3,000 GALLONS

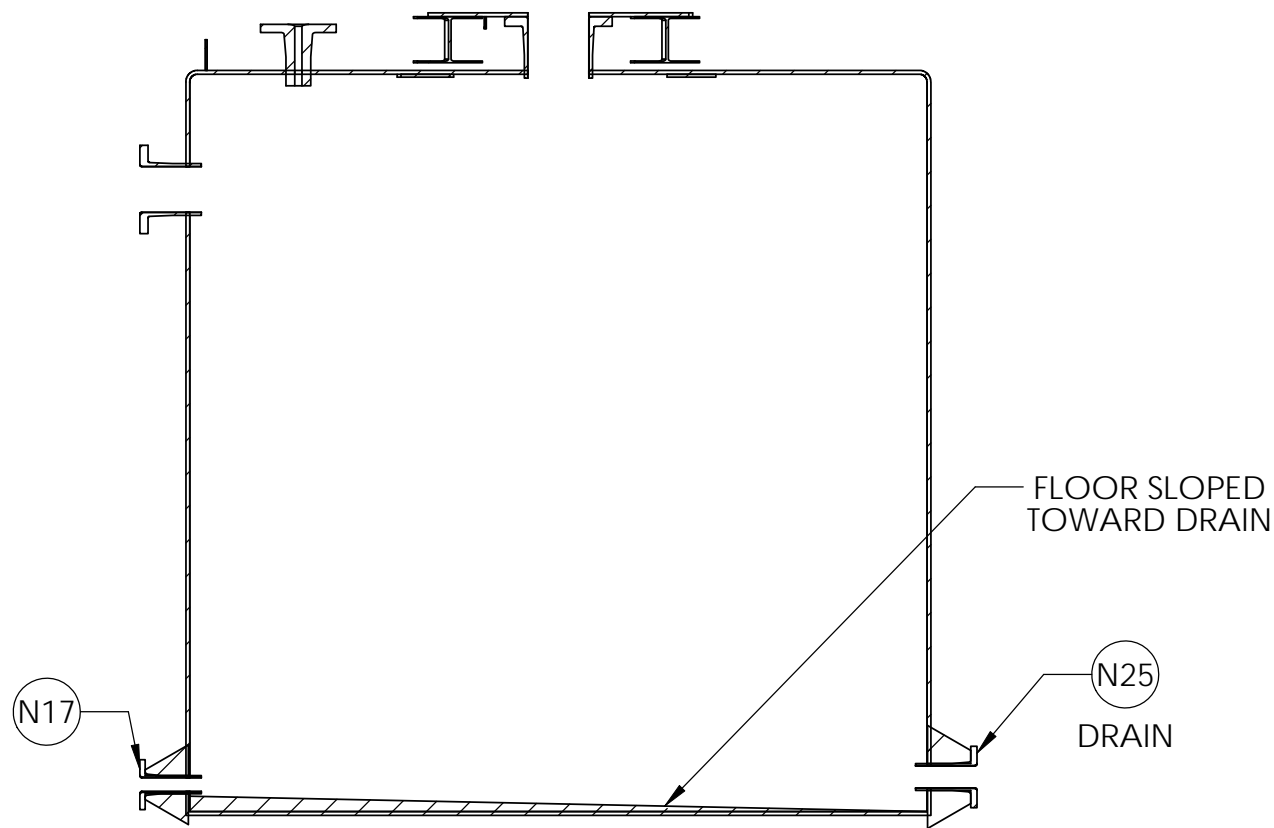
REVISIONS		
REV	DESCRIPTION	DATE
X2	RELEASE FOR APPROVAL	1/22/2015
X3	SYNCD NOZZLE SCHEDULE AND NOTES TO WASTECH DRAWING REV 3	2/2/2015
X4	N25 IDENTIFIED IN 90 DEGREE ELEVATION	2/4/2015

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 611 ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP
DIMENSIONS ARE IN INCHES		DRAWN	WH	
TOLERANCES:		CHECKED		
FRACTIONAL ± 1/8		ENG APPR.		
ANGULAR: ± 1 DEGREE		MFG APPR.		
TWO PLACE DECIMAL ±0.25		Q.A.		TITLE: WASTECH 21201 ITASCA STREET CHATSWORTH, CA REACTION WASTEWATER TANK
THREE PLACE DECIMAL ±0.13		COMMENTS:		
INTERPRET GEOMETRIC TOLERANCING PER:				
MATERIAL				SIZE DWG. NO. REV B WT - 14091 - 003 X4
FINISH				
DO NOT SCALE DRAWING				
				SCALE : NTS SHEET 1 OF 4

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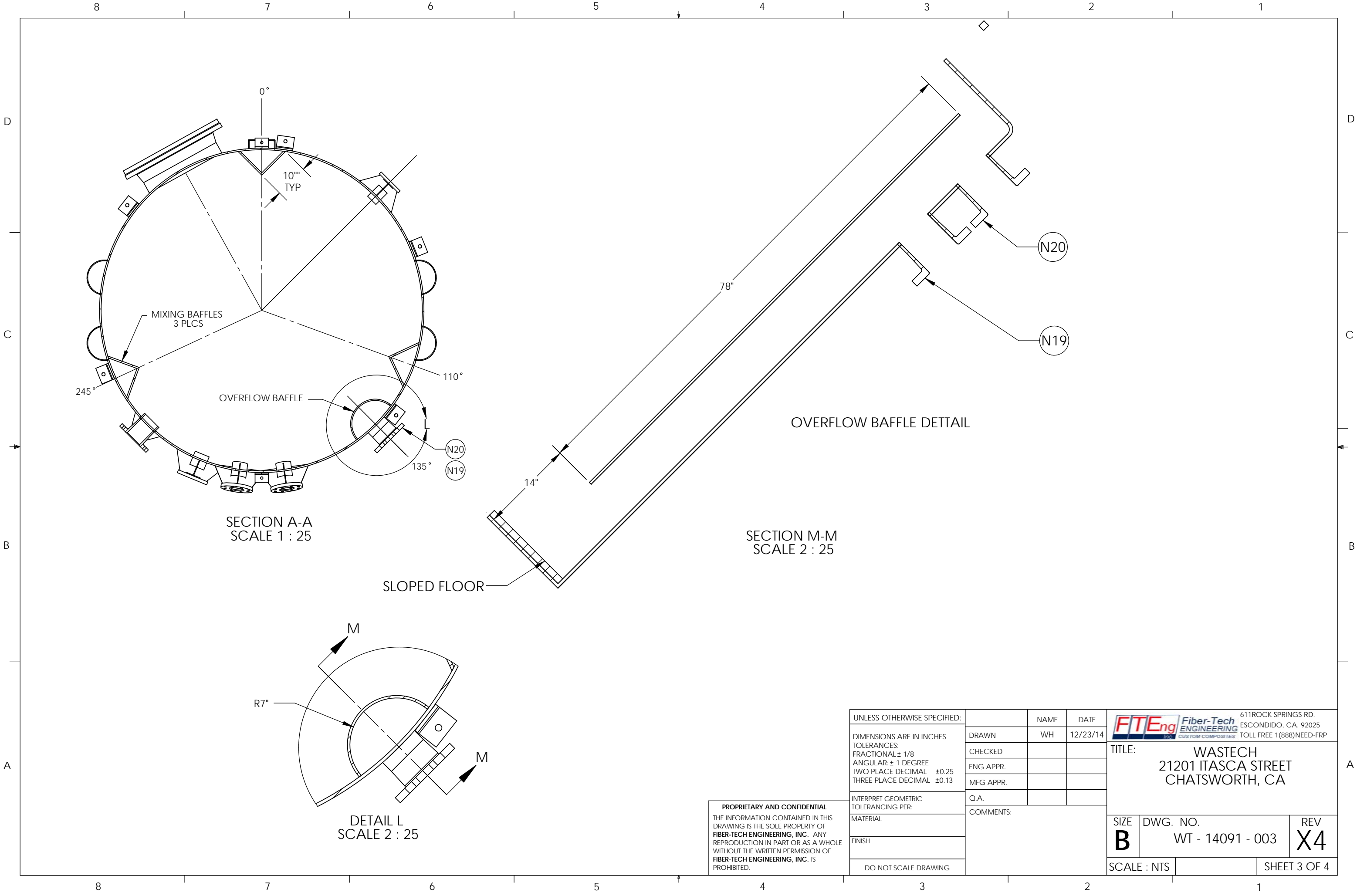
SECTION A-A
SCALE 1 : 25

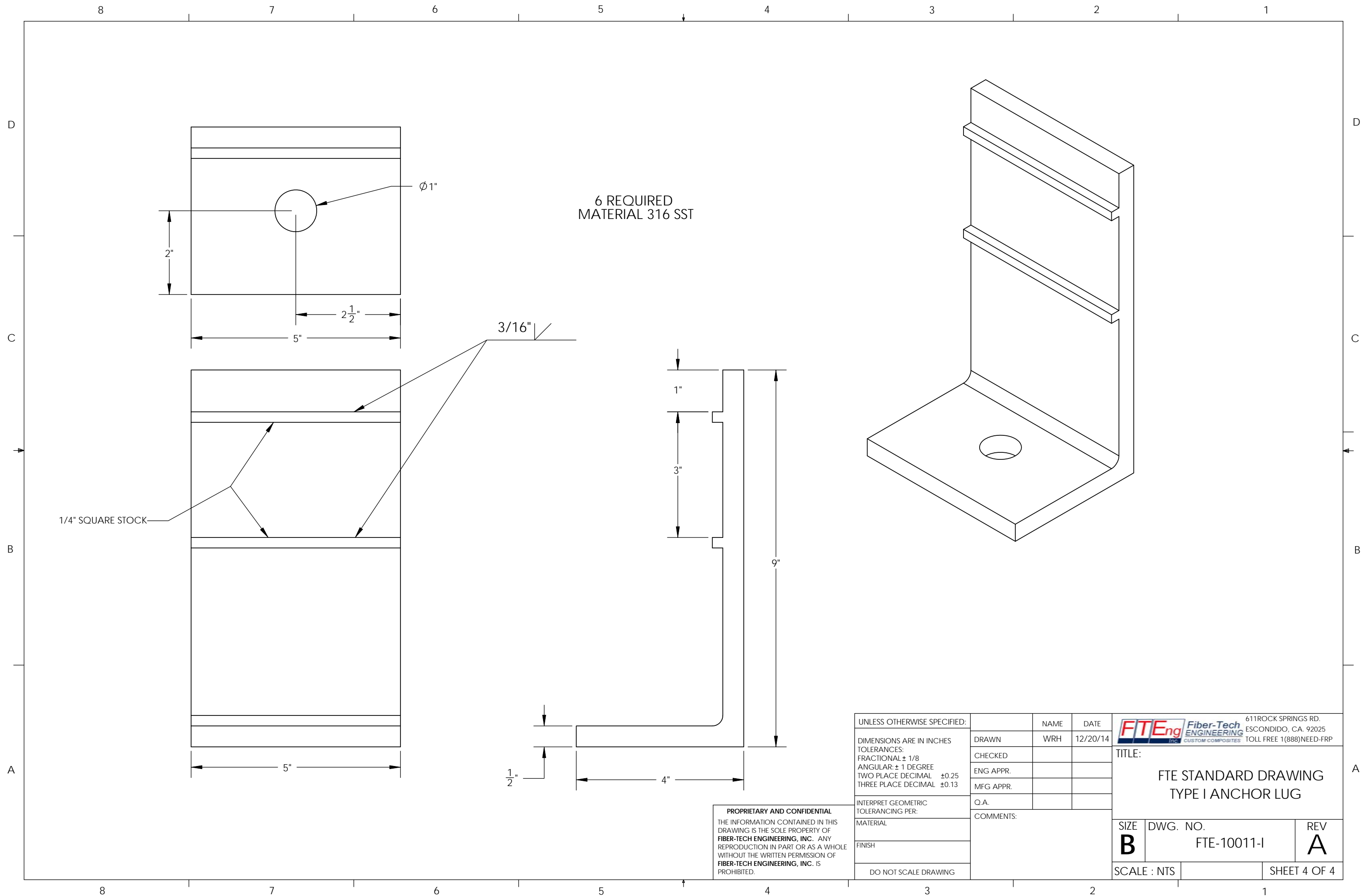


135° ELEVATION
SECTION F-F
SCALE 1 : 25

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DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/8 ANGULAR: ± 1 DEGREE TWO PLACE DECIMAL ±0.25 THREE PLACE DECIMAL ±0.13	DRAWN	WH	12/23/14			
	CHECKED					
	ENG APPR.					
	MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			TITLE: WASTECH 21201 ITASCA STREET CHATSWORTH, CA		
MATERIAL	COMMENTS:					
FINISH						
DO NOT SCALE DRAWING		SIZE B		DWG. NO. WT - 14091 - 003		REV X4
		SCALE : NTS				SHEET 2 OF 4







TOLL FREE 1-888-NEED-FRP

SERIAL #: WT - 14091 - 005

SERVICE: DIVERSION WASTEWATER

TANK NUMBER: AWN-TNK-400

DESIGN TEMPERATURE: 120F

SPECIFIC GRAVITY: 1.1

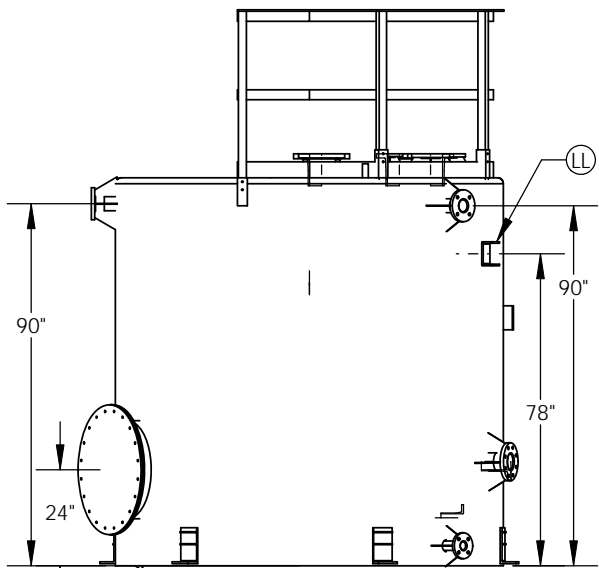
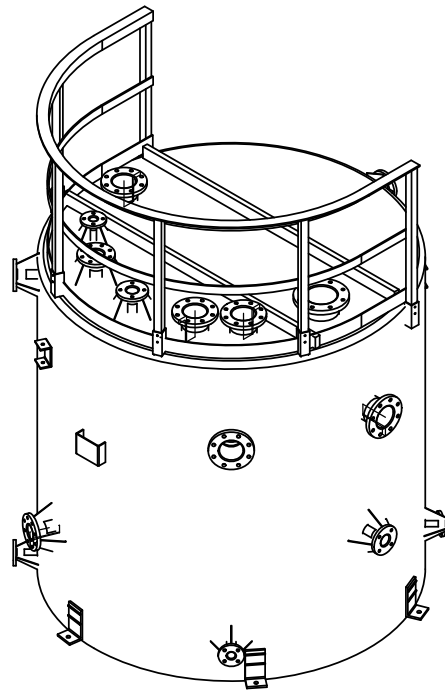
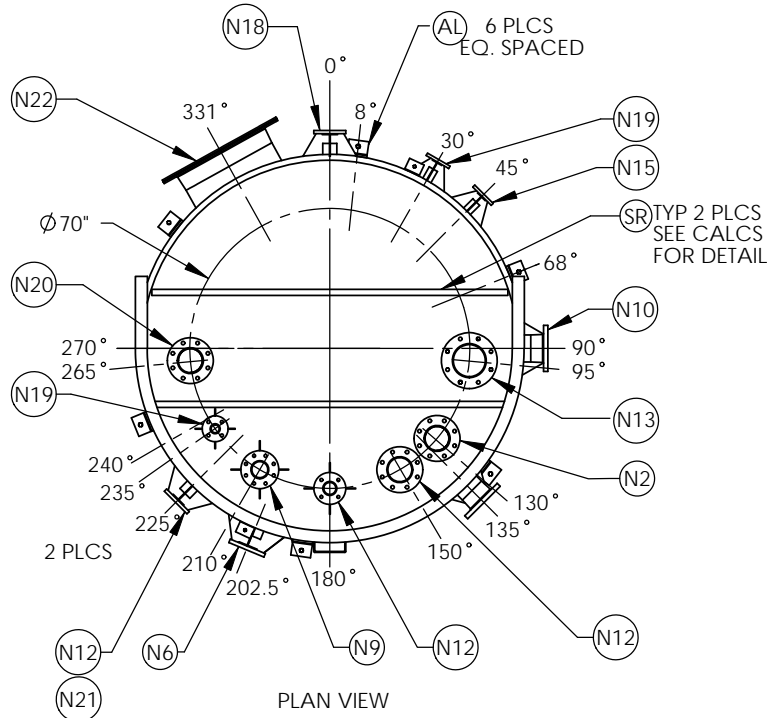
OPERATING PRESSURE: ATMOSPHERIC

MAXIMUM CAPACITY: 2,200 GALLONS

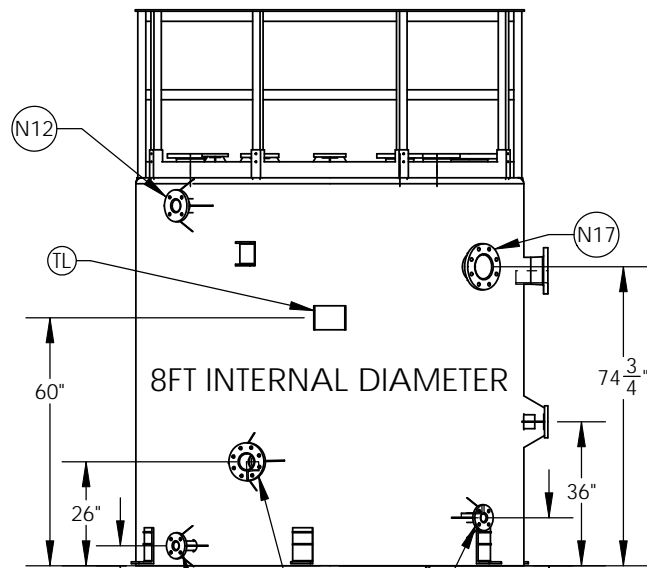
RESIN: HETRON 922

ESTIMATED EMPTY WEIGHT: TBD LBS.

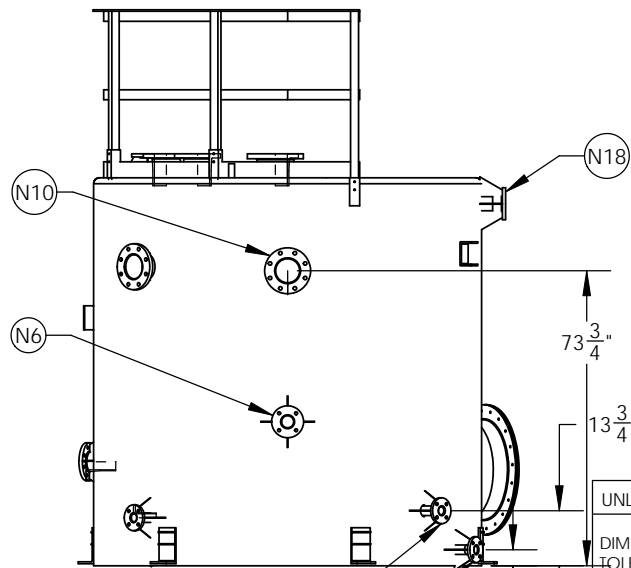
BUILT: JANUARY 2015



270° ELEVATION



180° ELEVATION



90° ELEVATION

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/8$
ANGULAR: ± 1 DEGREE
TWO PLACE DECIMAL ± 0.25
THREE PLACE DECIMAL ± 0.13

INTERPRET GEOMETRIC
TOLERANCING PER:
MATERIAL

FINISH

DO NOT SCALE DRAWING

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PARTS LIST

ITEM NO.	SIZE	MATL	SERVICE	DESCRIPTION	PROJ	PSI RATING	QTY
N1	-	-	RESERVED	NOT ON TANK	-	-	-
N2	6"	FRP	INLET FROM AWN-TNK-010	FF FLANGE	6"	150	1
N3	-	-	RESERVED	NOT ON TANK	-	-	-
N4	-	-	RESERVED	NOT ON TANK	-	-	-
N5	-	-	RESERVED	NOT ON TANK	-	-	-
N6	4"	FRP	SPARE	FF FLANGE	6"	150	2
N7	6"	FRP	SPARE	FF FLANGE	6"	150	1
N8	-	-	RESERVED	NOT ON TANK	-	-	-
N9	4"	FRP	VENT	FF FLANGE	6"	150	1
N10	6"	FRP	OVERFLOW	FF FLANGE	6"	150	1
N11	-	-	RESERVED	NOT ON TANK	-	-	-
N12	3"	FRP	SPARE	FF FLANGE	6"	150	2
N13	8"	FRP	VIEWPORT	FLANGE W/ COVER	6"	150	1
N14	2"	FRP	SAMPLING PORT	FF FLANGE	6"	150	1
N15	3"	FRP	SUCTION TO DIVERSION PUMP	FF FLANGE	6"	150	1
N16	-	-	RESERVED	NOT ON TANK	-	-	-
N17	6"	FRP	RAVITY FLOW FROM AWN-TNK-3	FF FLANGE	6"	150	1
N18	3"	FRP	F INLET FROM DIVERSION PUMP	FF FLANGE	6"	150	1
N19	2"	FRP	SENSOR PORT	FF FLANGE	6"	150	2
N20	6"	FRP	SENSOR PORT	FF FLANGE	6"	150	1
N21	3"	FRP	TANK DRAIN	FF FLANGE	6"	150	1
N22	24"	FRP	MANWAY	FLANGE W/ COVER	6"	25	1
HR	-	FRP	-	HANDRAIL ASSY	-	-	1
SR	-	WOOD	-	STIFFENING RIB	-	-	2
LL	-	316SS	-	LIFTING LUG	-	-	2
AL	-	316SS	-	ANCHOR LUG	-	-	6
TL	-	304SS	-	TANK LABEL	-	-	1

NOTES:

- BOLT HOLES TO STRADDLE MAJOR CENTERLINES UNLESS OTHERWISE SPECIFIED
- NOZZLES AND COUPLINGS PROTRUDE 2 INCHES WITHIN INSIDE WALL. PROJECTION PER NOZZLE SCHEDULE.
- ALL FLANGED NOZZLES 4" AND SMALLER ARE REINFORCED WITH FOUR 1/4 INCH THICK GUSSET
- SEE PLAN VIEW FOR TRUE ORIENTATION
- ALL LIFTING LUGS, ANCHOR LUGS AND FASTENERS ARE STAINLESS STEEL
- MANWAY GASKET MATERIAL IS EPDM

DESIGN:

SERVICE:	DIVERSION TANK
FABRICATION STANDARDS:	ASTM D 3299 & ASTM D 4097
VISUAL ACCEPTANCE:	LEVEL II IAW ASTM D2563
FABRICATION METHOD:	FILAMENT WOUND AND HAND LAYUP
SEISMIC ZONE:	D
WIND:	115 MPH
DESIGN ROOF LOAD:	250LBS
DESIGN PRESSURE:	ATMOSPHERIC
DESIGN VACUUM:	ATMOSPHERIC
MAX DESIGN TEMPERATURE:	150 F
SPECIFIC GRAVITY:	1.1
PRESSURE:	ATMOSPHERIC
MATERIALS OF CONSTRUCTION:	HETRON 922 OR EQUAL
CURE SYSTEM:	MEKP
CORROSION BARRIER:	100 MILS NEXUS VEIL
COLOR:	WHITE GEL COAT W/UV INHIBITOR
ESTIMATED EMPTY WEIGHT:	1,000 LBS
TANK CAPACITY:	3,000 GALLONS

REVISIONS

REV	DESCRIPTION	DATE
X2	RELEASE FOR APPROVAL	1/22/2015
X3	SYNCD NOZZLE SCHEDULE AND NOTES TO WASTECH DRAWING REV 3	2/2/2015
X4	NOZZLE AND DIMENSION CLARIFICATION PER WASTECH MARKUP	2/4/2015

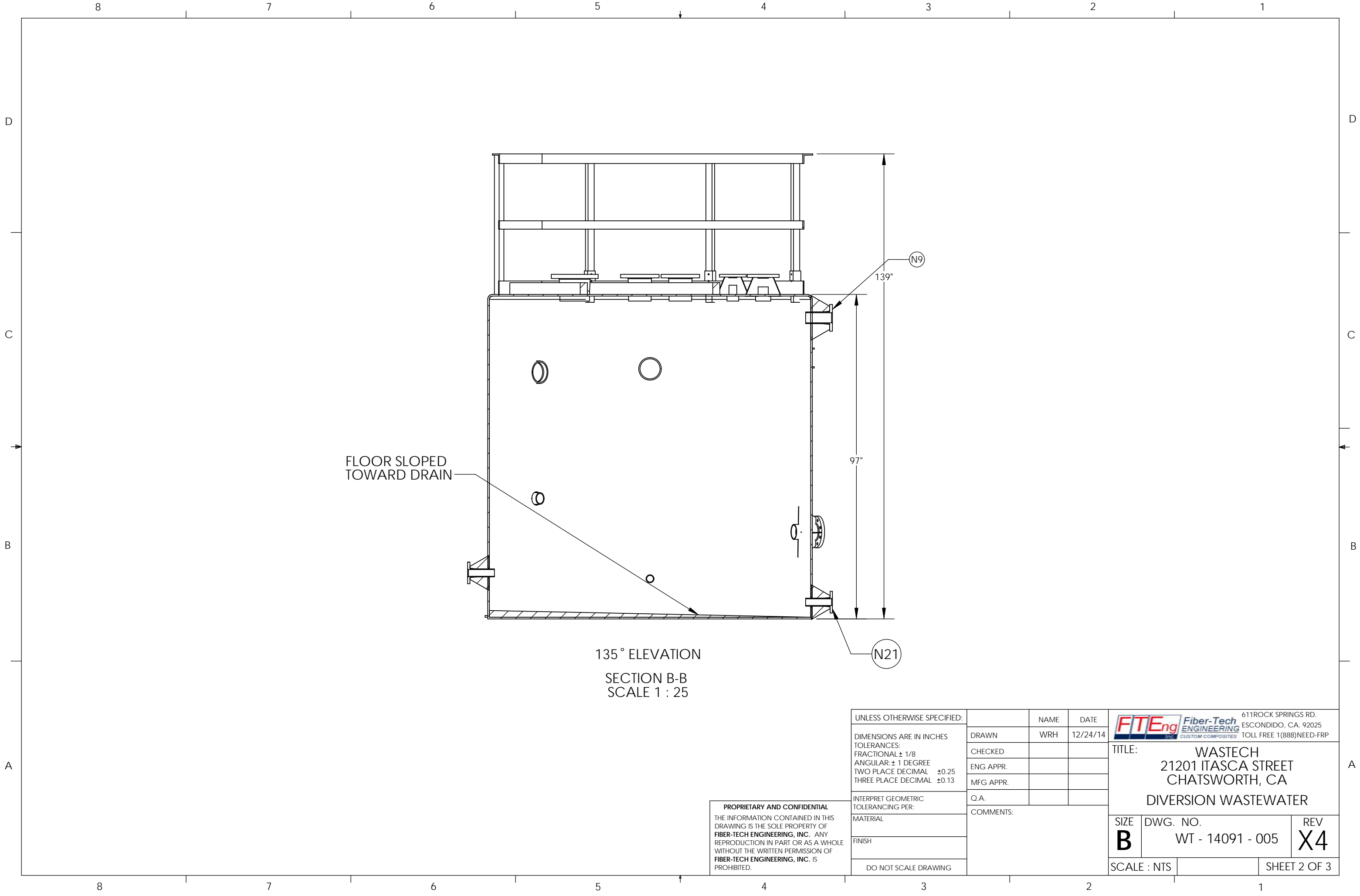


611 ROCK SPRINGS RD.
ESCONDIDO, CA. 92025
TOLL FREE 1(888)NEED-FRP

TITLE:
WASTECH
21201 ITASCA STREET
CHATSORTH, CA
DIVERSION WASTEWATER

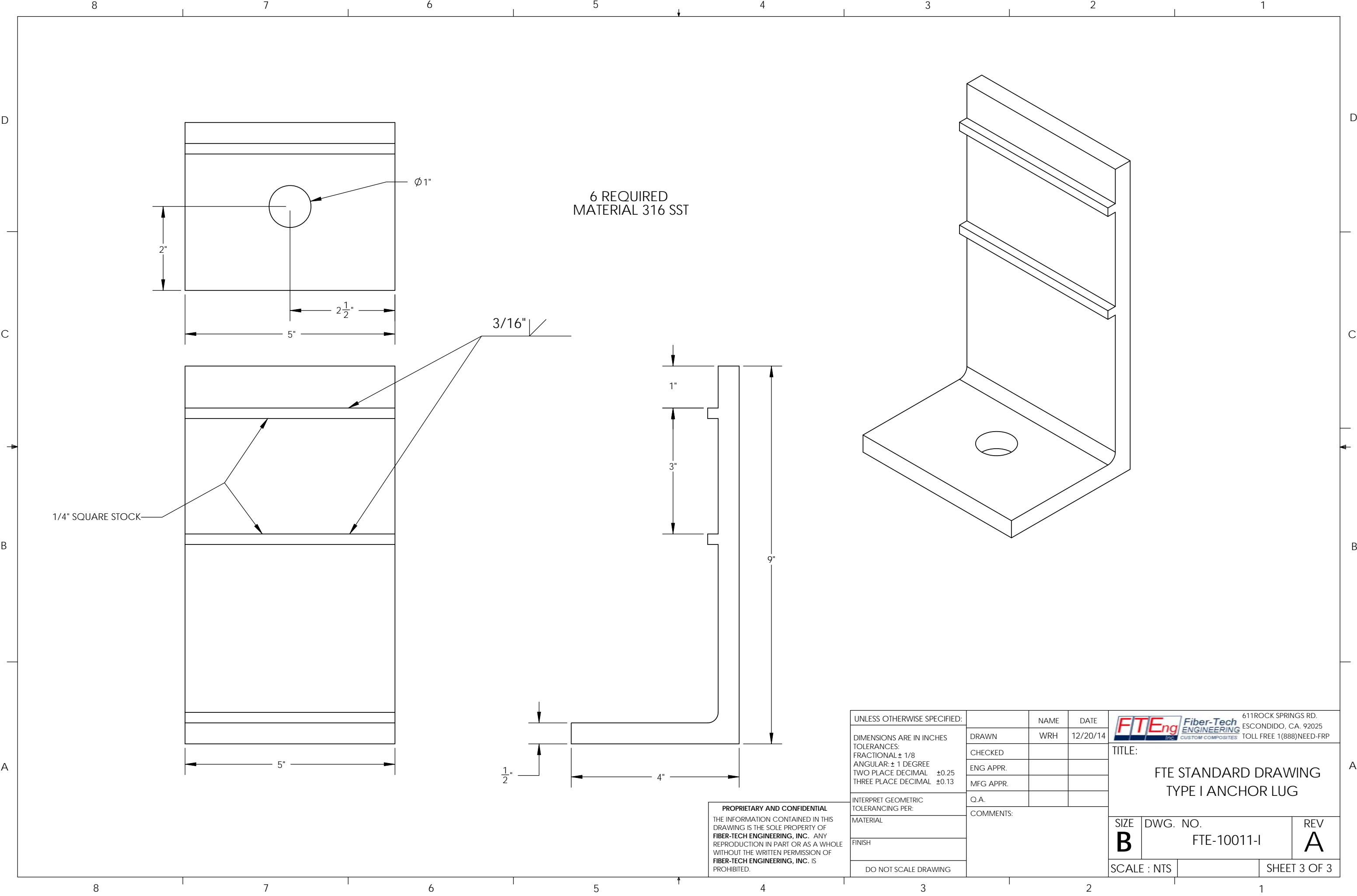
SIZE	DWG. NO.	REV
B	WT - 14091 - 005	X4

SCALE : NTS SHEET 1 OF 3



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DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/8 ANGULAR: ± 1 DEGREE TWO PLACE DECIMAL ±0.25 THREE PLACE DECIMAL ±0.13	DRAWN	WRH	12/24/14	TITLE: WASTECH 21201 ITASCA STREET CHATSWORTH, CA DIVERSION WASTEWATER		
	CHECKED					
	ENG APPR.					
	MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B WT - 14091 - 005 X4		
MATERIAL	COMMENTS:					
FINISH						
DO NOT SCALE DRAWING						
				SCALE : NTS		SHEET 2 OF 3



UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div><div><div><div>FTE</div><div>Eng</div></div><div><div>INC</div></div></div><div><div>Fiber-Tech</div><div>ENGINEERING</div></div><div><div>CUSTOM COMPOSITES</div></div></div></div> <div>611 ROCK SPRINGS RD. ESCONDIDO, CA. 92025 TOLL FREE 1(888)NEED-FRP</div>		
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/8 ANGULAR: ± 1 DEGREE TWO PLACE DECIMAL ±0.25 THREE PLACE DECIMAL ±0.13	DRAWN	WRH	12/20/14	TITLE: FTE STANDARD DRAWING TYPE I ANCHOR LUG		
	CHECKED					
	ENG APPR.					
	MFG APPR.					
INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
MATERIAL	COMMENTS:			SIZE	DWG. NO.	REV
FINISH				B	FTE-10011-I	A
DO NOT SCALE DRAWING				SCALE : NTS		

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ATTACHMENT 3
LEAK TEST RECORDS



PRESSURE TEST FORM

Project: <u>ARIAS</u>	Test No.: <u>42</u>
System: <u>A.W. DRAIN TO TANK 400</u> <u>PRIMARY</u>	Job #: <u>330382-1</u>
Date: <u>8/28/15</u>	

Brief Description of Test and Boundaries

REF. 43

Drawing / Spool #:	<u>A.W. DRAIN 6x10 PRIMARY (Waste Water)</u> <u>FROM Equalization TANK</u> <u>TO A.W. TANK 400</u>
Specification Title Section:	<u>A.W. DRAIN TO TANK 400</u>
Allowable Pressure Change:	<u>0</u> PSIG <u>5 PSI</u>
Test Medium:	<u>AIR</u>
Point of Connection:	<u>A.W. DRAIN FROM Equalization HEADER MEG3.</u>
Point of Termination:	<u>TO A.W. TANK 400</u>

Test Results

Date	Time			Pressure		Passed	Comments
	Start	End	Duration	Start	End	(Yes / No)	
<u>8-28-15</u>	<u>7:00 AM</u>	<u>8-29-15 7:00 AM</u>	<u>24 hrs</u>	<u>5.2 PSI</u>		Yes / No	
<u>8/29/15</u>	<u>08:00 AM</u>	<u>08:58 AM</u>	<u>1 HR</u>	<u>5.2 PSI</u>	<u>5.2 PSI</u>	<u>Yes / No</u>	<u>Passed for</u>
						Yes / No	
						Yes / No	
						Yes / No	

COMMENTS: _____

Completed By: Monte Morehead

Witnessed By: [Signature]

Date: 8-29-15

Date: 8-29-15

PRESSURE TEST FORM

Project: <u>ADIA'S</u>	Test No.: <u>33</u>
System: <u>ACID WASTE DIVERSION</u> Job #: <u>330 382-I</u>	Date: <u>8/25/15</u>

IR PRIMARY

Brief Description of Test and Boundaries

DISCONTINUED
TEST # 34

Drawing / Spool #:	<u>ACID WASTE DIVERSION II</u>
Specification Title Section:	<u>ACID WASTE DIVERSION II</u> <u>Primary piping</u>
Allowable Pressure Change:	<u>0</u> PSIG <u>5 PSI</u>
Test Medium:	<u>AIR</u>
Point of Connection:	<u>ACID WASTE PUMPING SKID</u>
Point of Termination:	<u>ACID TANK 400</u>

Test Results

Date	Time			Pressure		Passed	Comments
	Start	End	Duration	Start	End	(Yes / No)	
<u>8/25/15</u>	<u>0710</u>					Yes / No	
<u>8/26/15</u>	<u>0805</u>	<u>1112</u>	<u>7:14A</u>	<u>5.2</u>	<u>5.0</u>	Yes / No	<u>RECHECK 34 MAX</u>
	<u>11:45</u>	<u>7:30M</u>		<u>5.2</u>	<u>5.0</u>	Yes / No	<u>RAS2 PA</u>
						Yes / No	
						Yes / No	
						Yes / No	

COMMENTS: _____

Completed By: Monte Morehead

Date: 8-26-15

Witnessed By: Dan John

Date: 8/26/15



PRESSURE TEST FORM

Project: <u>ADIA'S</u>	Test No.: <u>37</u>
System: <u>6" ACID WASTE PRIMARY</u>	Job #: <u>330830-I</u> Date: <u>8/25/15</u>

Brief Description of Test and Boundaries

CONTINUED
#38

Drawing / Spool #:	<u>ACID WASTE DRAIN 6"x10"</u> <u>PRIMARY 6"</u>
Specification Title Section:	<u>ACID WASTE DRAIN FROM Equalization TANK</u>
Allowable Pressure Change:	<u>0</u> PSIG <u>5 PSI</u>
Test Medium:	<u>AIR</u>
Point of Connection:	<u>A.W. FROM Equalization TANK (PRIMARY)</u>
Point of Termination:	<u>M.W. TANK #100</u>

Test Results

Date	Time			Pressure		Passed	Comments
	Start	End	Duration	Start	End	(Yes / No)	
<u>8/25/15</u>	<u>7:10</u>					Yes / No	
<u>8/26/15</u>	<u>08:25</u>	<u>11:26</u>	<u>2:14R</u>	<u><5.6PSI</u>	<u><5.6PSI</u>	<u>Yes</u> / No	<u>PIPE IN SURETY TO PASS AT FINAL</u>
						Yes / No	
						Yes / No	
						Yes / No	

COMMENTS: _____

Completed By: Brian Buss
Witnessed By: Paul J. [Signature]

Date: 8/26/15
Date: 8/26/15



PRESSURE TEST FORM

Project: ARIAS	Test No.: 27
System: PRIMARY PIPING LIFT STATION TO HEADER	Job #: 330382-1 Date: 8/25/15

Brief Description of Test and Boundaries

Drawing / Spool #:	ACID WASTE EQUALIZATION HEADER TESTING SIX PRIMARY LINES BACK TO LIFT STATIONS ① SLWI ④ R.O. PERMEATE ② GW/DE REC. ⑤ A.W. DIVERSON I ③ A.W. ⑥ G.W. SKID
Specification Title Section:	PRIMARY PIPING FOR LIFT STATION TO HEADER
Allowable Pressure Change:	PSIG 5 PSI
Test Medium:	AIR
Point of Connection:	EQUALIZATION HEADER SKID
Point of Termination:	LIFT STATIONS 1,2,3,4,5,6

Test Results

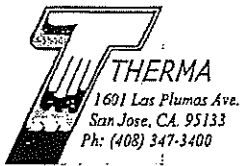
	Date	Time			Pressure		Passed (Yes / No)	Comments
		Start	End	Duration	Start	End		
SLWI	8/25/15	7:10					Yes / No	PIPE INSUR TO 0°F AT
	8/26/15	8:25	11:20	21 HR	<5.2 PSI	<5.6 PSI	Yes / No	PASSED PWT FINAL
DE REC	8/25/15	7:10					Yes / No	"
GW	8/26/15	8:25	11:20	21 HR	<5.2 PSI	<5.6 PSI	Yes / No	PASSED PWT
DE REC	8/25/15	7:10					Yes / No	"
A.W.	8/26/15	8:25	11:20	21 HR	<5.2 PSI	<5.6 PSI	Yes / No	PASSED PWT
	8/25/15	7:10					Yes / No	"
R.O.	8/26/15	8:25	11:20	21 HR	<5.2 PSI	<5.6 PSI	Yes / No	PASSED PWT
PERMEATE	8/25/15	7:10					Yes / No	"
	8/26/15	8:25	11:20	21 HR	<5.2 PSI	<5.6 PSI	Yes / No	PASSED PWT
GRAY WATER	8/26/15	8:25	11:20	21 HR	<5.2 PSI	<5.6 PSI	Yes / No	PASSED PWT in sun to 0°F AT FINAL

Completed By: B. B. B.

Date: 8/26/15

Witnessed By: [Signature]

Date: 8/26/15



PRESSURE TEST FORM

Project: <u>ARIS</u>	Test No.: <u>40</u>
System: <u>A.W. Equalization Header</u>	Job #: <u>330382-I</u>
<u>secondary</u>	Date: <u>9/1/15</u>

Brief Description of Test and Boundaries

CONTINUED # 29

Drawing / Spool #:	<u>A.W. secondary line coming from Equalization Header to lift station trench</u>
Specification Title Section:	<u>A.W. secondary Header drain line</u>
Allowable Pressure Change:	<u>0</u> PSIG <u>5 PSI</u>
Test Medium:	<u>AIR</u>
Point of Connection:	<u>A.W. Equalization Header</u>
Point of Termination:	<u>at A.W. lift station (trench)</u>

Test Results

Date	Time			Pressure		Passed	Comments
	Start	End	Duration	Start	End	(Yes / No)	
<u>9-1-15</u>	<u>7:00</u>	<u>7:00</u> <u>9-2-15</u>	<u>24 hrs</u>	<u>5.4</u>	<u>5.4</u>	<u>Yes / No</u>	
<u>9/2/15</u>	<u>7:30 AM</u>	<u>8:45 PM</u>	<u>7 HR</u>	<u>5.4 PSIG</u>	<u>6.2 PSIG</u>	<u>Yes / No</u>	<u>PIPE IN GOOD CONDITION. PRESS. TESTED AT LIFT STATION. NO LEAKS IN TRENCH.</u>
						<u>Yes / No</u>	
						<u>Yes / No</u>	
						<u>Yes / No</u>	

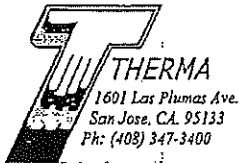
COMMENTS: _____

Completed By: Monte Morehead

Date: 9-2-15

Witnessed By: [Signature]

Date: 9/2/15



PRESSURE TEST FORM

Project: <u>ARDA S</u>	Test No.: <u>34</u>
System: <u>ACID WASTE DIVERSION II SECONDARY</u>	Date: <u>9/1/15</u>
Job #: <u>330382-I</u>	

Brief Description of Test and Boundaries

continued # 33
TEST

Drawing / Spool #:	<u>ACID WASTE DIVERSION II SECONDARY piping</u>
Specification Title Section:	<u>ACID WASTE DIVERSION II SECONDARY piping</u>
Allowable Pressure Change:	<u>Ø</u> PSIG <u>5 psi</u>
Test Medium:	<u>AIR</u>
Point of Connection:	<u>ACID WASTE PUMPING SKID</u>
Point of Termination:	<u>ACID TANK 400</u>

Test Results

Date	Time			Pressure		Passed (Yes / No)	Comments
	Start	End	Duration	Start	End		
<u>9-1-15</u>	<u>7:00 AM</u>	<u>7:00 AM</u> <u>9-2-15</u>	<u>24 Hrs</u>	<u>5.0</u>	<u>5.0</u>	Yes / No	
<u>9-2-15</u>	<u>7:59 AM</u>	<u>156:40</u>	<u>21:42</u>	<u>4.9 psi</u>	<u>5.0 psi</u>	<input checked="" type="checkbox"/> Yes / No	<u>Pressure</u> <u>ALSO CHECKED</u>
						Yes / No	
						Yes / No	
						Yes / No	

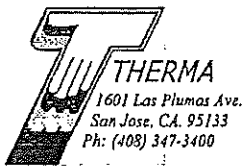
COMMENTS: _____

Completed By: Monte Morales

Witnessed By: Frank

Date: 9-2-15

Date: 9/1/15



PRESSURE TEST FORM

Project: <u>ARIAS</u>		Test No.: <u>41</u>
System: <u>A.W. DIVERSION SECONDARY</u>	Job #: <u>B30382-I</u>	Date: <u>9/1/15</u>

Brief Description of Test and Boundaries

continued # 27

Drawing / Spool #:	<u>A.W. DIVERSION secondary line coming FROM Equalization TANK TO A.W. DIVERSION SKID TANK #400 SKID</u>
Specification Title Section:	<u>ACID WASTE secondary FROM DIVERSED PUMP SKID</u>
Allowable Pressure Change:	<u>0</u> PSIG <u>5 PSI</u>
Test Medium:	<u>AIR</u>
Point of Connection:	<u>DIVERSIONARY TANK SKID</u>
Point of Termination:	<u>Equalization Header or Manj</u>

Test Results

Date	Time			Pressure		Passed	Comments
	Start	End	Duration	Start	End	(Yes / No)	
<u>9-1-15</u>	<u>7:00 AM</u>	<u>7:00 AM</u>	<u>24 hrs</u>	<u>5.0</u>	<u>5.0</u>	<u>Yes / No</u>	
<u>9-2-15</u>	<u>7:59 AM</u>	<u>1:56 PM</u>	<u>7:1 hr</u>	<u>4.1 PSI</u>	<u>5.0 PSI</u>	<u>Yes / No</u>	<u>Passed by A.W. DIVERSIONARY TANK SKID</u>
						<u>Yes / No</u>	
						<u>Yes / No</u>	
						<u>Yes / No</u>	

HEADING WORK

COMMENTS: _____

Completed By: Monte Norland
 Witnessed By: [Signature]

Date: 9-2-15
 Date: 9/2/15



PRESSURE TEST FORM

Project: <u>ARIA</u>		Test No.: <u>38</u>
System: <u>AWN Drain TANK</u> <u>secondary pipe</u>	Job #: <u>830382-F</u>	Date: <u>9/13/15</u>

Brief Description of Test and Boundaries

REF #37

Drawing / Spool #:	<u>10x6 AWN Drain Secondary Pipe</u> <u>From Equalization TANK -010 (MEZZ) TO</u> <u>AWN T-100</u>
Specification Title Section:	<u>AWN DRAIN 10"x6" From Equalization TANK -010</u>
Allowable Pressure Change:	<u>0</u> PSIG
Test Medium:	<u>AIR</u>
Point of Connection:	<u>Secondary Pipe EQ TANK 010</u>
Point of Termination:	<u>Secondary Pipe AWN TANK -100</u>

Test Results

Date	Time			Pressure		Passed	Comments
	Start	End	Duration	Start	End	(Yes / No)	
<u>9-3-15</u>	<u>6:00 AM</u>	<u>6:00 AM</u> <u>9-4-15</u>	<u>24 Hrs</u>			Yes / No	
<u>9/4/15</u>	<u>6:21 AM</u>	<u>8:08 AM</u>	<u>7 HR</u>	<u>5.0 PS</u>	<u>5.0 PS</u>	<u>YES</u> / No	<u>1200 PSI</u> <u>FR TANK 010 TO TANK 100</u>
						Yes / No	
						Yes / No	
						Yes / No	

COMMENTS: _____

Completed By: Monte Morehead
 Witnessed By: [Signature]

Date: 9-4-15
 Date: 9/4/15



PRESSURE TEST FORM

Project: <u>ARIA</u>	Test No.: <u>44</u>
System: <u>AWN Drain TANK Secondary pipe</u>	Job #: <u>330382-I</u>
	Date: <u>9/3/15</u>

Brief Description of Test and Boundaries

REF 27

Drawing / Spool #:	<u>AWN Drain Secondary Pipe From EQUALIZATION TANK-010 (Mezz) TO AWW T-400 10"x6"</u>
Specification Title Section:	<u>AW Drain 10x6 From EQUALIZATION TANK -010</u>
Allowable Pressure Change:	<u>0</u> PSIG
Test Medium:	<u>AIR</u>
Point of Connection:	<u>secondary pipe EQ TANK -010</u>
Point of Termination:	<u>Secondary pipe TANK -400</u>

Test Results

Date	Time			Pressure		Passed	Comments
	Start	End	Duration	Start	End	(Yes / No)	
<u>9-3-15</u>	<u>6:00 AM</u>	<u>6:00 AM</u>	<u>24 Hrs</u>			<u>Yes / No</u>	
<u>9/4/15</u>	<u>6:23 AM</u>	<u>8:12 AM</u>	<u>7:11 Hrs</u>	<u>5.2 PSI</u>	<u>5.4 PSI</u>	<u>Yes / No</u>	<u>Passing from tank 010 to tank 400</u>
						<u>Yes / No</u>	
						<u>Yes / No</u>	
						<u>Yes / No</u>	

COMMENTS: _____

Completed By: Monte Morehead

Witnessed By: Paul John

Date: 9-4-15

Date: 9/4/15